The RUBBER AGE

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CONTINUED AGITATION FOR REMOVAL OF RESTRICTION IN GREAT BRITAIN

House of Commons Appealed to by Industrial Group to Overcome Possibility of Shortage—Producers Are Dissociating Themselves From Stevenson Scheme

LONDON, August 6, 1925—The Industrial Group of members of the House of Commons has just received a deputation from the Rubber Manufacturers' Association which desired to place before this body of Parliament members a statement of the case for the modification of the restriction scheme.

The deputation included Sir George Beharrel, managing director of Dunlop Rubber Co., Colonel Seely Clarke, and Mr. Moseley of David Moseley & Sons. It pointed out that unless there is a modification of restriction to the extent of 5 or 10 per cent above the present Stevenson level many of the smaller rubber manufacturers will be forced out of business in the next few months.

Oswald Moseley, governing director of the Manchester rubber manufacturing firm bearing his name, who is a former member of the Stevenson committee which framed the restriction scheme, issued a statement today emphasizing the vital need for the release of further supplies of rubber if employment in rubber factories is to be maintained.

"Many factories," he said, "are short of rubber and some are working short time and will have to close down altogether, throwing thousands of workers on dole. If the Government does not grant an extra release the Colonies will inevitably take the law into their own hands."

In the recent agitation in Britain to cancel the Stevenson scheme, the point has been raised that the British undertakings operating in the Dutch East Indies, which are voluntarily restricting their outputs, should dissociate themselves from the scheme and return to full production. This could be done without any legislation and the result would be a considerably larger release of rubber without any modification of restriction. Several such companies have already dropped the scheme, one being the Gadjah Rubber Estates, which increased its output for the financial year ending April 30 last from 209,862 lbs. to 317,200 lbs.

The London Stock Exchange Committee has decided not to accede to a recent petition for an earlier contango day for rubber shares. The desire of concerns most intimately associated with the rubber market to have an additional day granted between the make-up and the actual pay day was the natural outcome of the recent furious activity in rubber shares, the overtime settlement work which severely taxed many office staffs. Settlements are made semi-monthly, not daily as in America.

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U. S. RUBBER SALES SHOW 19% INCREASE OVER 1924

Sales of the U. S. Rubber Co. for the six months ended June 30, 1925, amounted to $92,530,127, an increase of $14,755,431, or 18.97%, over the corresponding period of last year. This increase resulted principally from a very substantial increase in unit sales of tires, the average selling prices being materially lower than for the corresponding period in 1924, notwithstanding the fact that prices were advanced in May, and again in June, 1925. Sales of other products were satisfactory, especially mechanical goods, which showed a substantial increase.

Net income amounted to $8,860,674 before interest on the funded indebtedness but after all other charges including depreciation of plants; interest on the funded indebtedness amounted to $2,985,470, leaving a net income of $5,875,204. This compares with $4,422,487 for the first six months of 1924, an increase of $1,452,717, or 32.85%.

As of June 30, 1925 current assets amounted to $124,073,421, consisting of Cash, $9,582,328; Accounts Receivable, less adequate reserves for doubtful accounts, $47,514,333; Inventories of Finished Goods and Raw Materials, at cost, which was materially below replacement value, $66,976,76.

Current liabilities amounted to $17,751,028, consisting of current accounts payable, acceptances for importation of crude rubber, and accrued liabilities. There were no bank loans.

"Contractual liabilities," said C. B. Seger, Chairman of the Board, "representing forward commitments for raw materials and supplies, were at prices substantially below market, and as to quantities covered future requirements for conservative periods.

"The high prices of crude rubber which have prevailed for several months have resulted in a substantial increase in the profits of the plantation companies owned by this Company. As yet, no part of the profits of the plantation companies has been included in the income of the United States Rubber Company."

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UNITED STATES EXPORTS OF RUBBER MANUFACTURES HIGHEST SINCE 1920

Shipments for Half Year Total $23,857,173 and Exceeds Figure for Corresponding 1924 Period by More Than 20 Per Cent—Unit Values Larger

The total value of exports of rubber manufactures from the United States during the six months ended June 30 was $23,857,173 and exceeded the value of exports for the same period in any year since the peak year of 1920, according to the Rubber Division, Department of Commerce. This value represents an increase of more than 20 per cent over the $19,648,687 worth of rubber products exported in the first six months of 1924.

The increase is chiefly due to a greater volume of exports, but in a measure is also the result of the higher unit value of the various commodities. Whether this increase presages a permanent improvement in the share of American manufacturers in the world trade in rubber products is problematical. The rise in the price of crude rubber and the resulting increase in the price of rubber products, may have influenced foreign dealers toward overstocking, which would be reflected, accordingly, in a falling off of imports in the latter part of the year. On the other hand, the improvement in world economic conditions, and the general price increases in the leading consuming countries, no doubt, will place American manufacturers in a more favorable competitive position.

Exports of pneumatic casings, which amounted to 803,790, valued at $9,427,601, reached their highest points during March, April and May, but showed a considerable decline in June, likely due to the confused price situation. However, the unit value of casings in June was higher than in any other month of this period. Argentina was the leading market taking 95,287 automobile casings; Great Britain took 77,055, Brazil, 65,162, Denmark, 54,632, Mexico, 41,371, Australia, 40,883, Cuba, 40,105. Other important markets were Japan, Philippine Islands, New Zealand, Sweden, British South Africa, Uruguay, Netherlands, Norway and Spain. These countries, likewise, furnished the principal markets for pneumatic tubes.

Solid tire exports amounted to 55,040 valued at $1,414,918. The United Kingdom was the principal distination, taking 13,994; Australia, 7,822; Cuba, 7,449; New Zealand, 3,261; Japan, 2,834; Argentina, 1,987. Shipments of tire accessories and repair materials amounted to 1,101,159 pounds valued at $464,514, and went chiefly to Canada, United Kingdom, Argentina, Australia, Cuba, Mexico and France.

Latin America furnished the principal markets for the 2,346,461 pairs of canvas rubber-soled shoes exported, valued at $1,672,977. There were 347,784 pairs of rubber boots exported during this period valued at $845,452 and 350,486 pairs of rubber shoes valued at $314,328. The United Kingdom, New Foundland, and Labrador, China, Norway, Cuba, New Zealand and Canada were the leading importers of these products. Mexico, Cuba, Chile, Argentina, Philippine Islands, United Kingdom, Sweden and Denmark were the leading markets for the 1,572,243 pounds of rubber soles and heels valued at $486,530 exported.

The trade in rubber mechanical goods was maintained at a high level during this period. The exports of rubber belting consisted of 1,967,171 pounds valued at $1,125,695; rubber hose, 2,627,460 pounds valued at $1,001,693, and packing 797,361 pounds valued at $362,849. Mexico ranks first in this trade taking 270,675 pounds of rubber belting, 365,643 pounds of rubber hose and 69,842 pounds of rubber packing. The United Kingdom is equally important taking 246,115 pounds of rubber belting, 529,002 pounds of rubber hose, and 50,209 pounds of rubber packing. Chile, British South Africa, Australia, Cuba, Brazil, Japan, Philippine Islands, France, Belgium and the Scandinavian countries are good markets for the widely distributed trade in rubber mechanical goods.

The large gain in the shipments of druggists' rubber sundries over the corresponding period of 1924, would seem to indicate an increasing hold of American manufacturers on foreign markets for these products. There were 125,100 water bottles and syringes exported at a value of $84,599, and 396,065 pounds of other druggists' sundries valued at $437,516 as compared to 81,471 bottles and syringes and 323,486 pounds of other sundries in the first six months of 1924. The United Kingdom took 39,204 dozen of the 140,494 dozen bathing caps exported, valued at $231,877. Canada, Denmark, France, Sweden and Japan also took large shipments of this article.

The increase in the exports of rubber toys, balls and balloons from 425,541 pounds valued at $436,995 in the first six months of 1924 to 585,318 pounds valued at $697,090 in the same period of 1925 indicates a growing market for American manufacturers in this line.

Hard rubber electrical supplies were exported to the amount of 477,217 pounds valued at $149,191 and other hard rubber goods to the amount of 373,439 pounds valued at $328,088. The exports of reclaimed and scrap and old rubber have steadily increased during the first six months of this year, probably as a result of the high price of crude rubber, which tends toward an increased consumption of substitutes. Exports of reclaimed rubber amounted to 4,599,023 pounds valued at $433,883 and of scrap and old to 17,315,263 pounds valued at $732,507.

French Tire Increase

According to a cablegram from Assistant Commercial Attache R. C. Miller, Paris, July 29, Michelin increased retail tire prices on July 29 as follows: Millimeter casings, 23%; balloon casings 27%; straightside high pressure casings, 27%; inner tubes, 35%; motorcycle and bicycle casings and solid truck tires, 25%. New retail price list has not yet been issued, but a letter stating these precentage increases has been sent to dealers.

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NO REDUCTION IN TIRE OUTPUT DESPITE REPORTS

A report recently received stated that tire manufacturers in the Akron district had announced decreases in production to start immediately and to reach 25% by October 1st. At the present time, however, tire factories are showing no signs of a let-up and there is little possibility of a reduction in production being put into effect before September. It is said that Firestone is working only five days a week, Goodyear has reduced production by 2,000 tires a day and that Miller reduced 500 tires a day. Downward trends in crude rubber prices have been welcomed by manufacturers but no reduction in retail prices is expected while rubber continues at present levels.

RUTHERFORD RETURNS FROM TRIP ABROAD

W. O. Rutheford, president of the Rubber Association of America and vice president of the B. F. Goodrich Co., recently returned from a six weeks trip to France, England, Germany and Belgium. While in Brussels he attended the International Chamber of Commerce sessions. Upon his return, Mr. Rutherford refused to issue any statement on the rubber situation but at the offices of the Rubber Association it was said that a meeting would be called shortly to discuss crude plans. This meeting, in conjunction with the renewed interest being shown by Secretary Hoover in rubber, should be of vast importance in helping solve the problem of high rubber prices.

Auction of N. Y. Rubber Plant

The plant of the New York Rubber Co., Beacon, N. Y., was offered at auction on August 11 and the high bid was made by the Tucker Rubber Co., Buffalo, N. Y. The price was $50,100. Upon being put up in separate parcels, an offer of $25,000 was made for the machinery by Albert & Son of Trenton, N. J., and $3,500 for a large mill with motor by the Farrell Foundry and Machine Co., Ansonia, Conn. The court will review the bids and inform the interested firms of its disposition of the bids.

Goodyear Dividends

It is reported that directors of the Goodyear Tire & Rubber Co., will meet shortly and are expected to liquidate accumulated dividends on preferred stock amounting to over four million dollars.

Trent Rubber Sale Ordered

Friday, September 11, at eleven a. m., has been set as the date for the public sale of the property of the Trent Rubber Company, of Trenton, N. J. At this sale, to be held at the company's property on Enterprise avenue, there will be offered to the highest bidder the real estate, plant, machinery and equipment, excepting only such cash, accounts and bills receivable and returned used tires as may be on hand.

Including taxes, mortgages and two conditional bills of sale on certain of the equipment, the purchaser is required to assume obligations of $139,476.16, of which $110,000.00 is represented by mortgages on the two parcels of real estate owned by the company.

Twenty per cent of the bid price is required at the time of the sale, the balance to become due upon confirmation of the sale by the court; this being scheduled for 10:30 in the forenoon of September 21, at the U. S. District Court in Newark, N. J.

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I.R.M.A. CALLS SPECIAL MEETING OF PROTEST AGAINST RESTRICTION

Leading English Manufacturers Meet to Protest Against High Prices of Rubber—Association Represents 95% of Crude Consumption in Great Britain—May Ration Consumption

By THE RUBBER AGE Special Representative

At short notice, a special meeting of the general executive of the Indiarubber Manufacturers' Association of Great Britain has just been held to consider the present critical position of the rubber manufacturing industry in the United Kingdom and other countries in consequence of the present inflated price of spot rubber. The concerns represented were North British Rubber Co., Dunlop Rubber Co., Spencer Moulton Rubber Co. of Scotland, Ancoats Vale Rubber Co., Ioca Rubber Co., A. D. Ingrams, Greengate & Irwell Rubber Co., and Avon Indiarubber Co.

THE RUBBER AGE presents in this first hand report from our Special Correspondent in England a complete report on the action which English rubber manufacturers are taking to combat restriction and soaring rubber prices. Note particularly that English manufacturers are planning to restrict consumption, a scheme which follows closely that outlined by the Rubber Association of America in its advocacy of restriction of odd sizes of tires, interchangeable and second grade tires in addition to other rubber products whose manufacture can be curtailed.

Represent 95% of Industry

It was felt that a full statement of the position should be issued to the press, preparatory to drastic steps being taken by manufacturers to combat the present position. In a lengthy communication issued after the meeting, the association, which represents 95 per cent of the crude rubber consumption in Britain, stated it desired to protest strongly against the continuance in operation of the Stevenson scheme in its present form. In the public interests it believed this legislation should be repealed or drastically modified for the following reasons:—

1. The scheme was promulgated by a packed committee, consisting (so far as the unofficial representatives were concerned) of members interested in securing the highest possible price for crude rubber.

2. The present drastic restriction of rubber exports from Malaya and Ceylon is responsible for the sale of rubber at 4s. 4d. ($1.05) per lb., against an average all-in cost of production of approximately 8½d. (17 cents); the average selling price during the whole of 1924 being about 1s. 2d. (28 cents).

It is our duty to point out in this connection that: (a) the price of rubber goods must necessarily be increased to a level which will bear hardly upon the consumer; (b) that in the case of those manufacturers who are forced to buy on the "spot" market, the position may necessitate the shutting down of their plant, with resulting unemployment.

3. There has been a distinct breach of faith in regard to the operation of the scheme. The existing scheme was sanctioned by the Government on the distinct understanding, the Association states, that its objective was to stabilize the price of rubber at 1s. 3d. (30 cents) per lb., to which price manufacturers would raise no objection.

Action of Winston Churchill

In corroboration of its charge of breach of faith, the association states that Winston Churchill, as Colonial Secretary, was responsible for piloting the scheme through the Cabinet in October, 1922, and for instructing the Legislatures of Malaya and Ceylon to pass the necessary legislation. In his speech at the Incorporated Society of Planters' dinner on July 18, 1924, Mr. Churchill stated:—

"It was not with any idea of raising the price to a monopoly pitch, or with any idea of restricting the permanent growth of rubber production throughout the world, that the scheme was embarked on, but with the idea of attaining stability. Producers want stability, a steady level of prices which will permit of the scientific development of the plantations and enable the industry to get upon a solid and sure foundation. That is the object they have in view, and the figure they have in mind at which there is a fair profit to the producer is 1s. 3d. per lb. It was the last decision I ever obtained from a Cabinet, and I obtained it in the last quarter of an hour, and in another quarter of an hour the telegrams had gone to Malaya and Ceylon instructing them to pass the necessary legislation. I hope that on the basis of this scheme producers will be able effectively to deal with the difficulties of their industry."

Holding these views, it is a reasonable assumption, the association states, that Mr. Churchill urged the adoption of the scheme on the grounds that there could be no soaring of prices, and that by the scheme the price would be stabilized about 1s. 3d. In the I.R.M.A.'s view, the Government, in taking no steps to meet the present crucial situation, is guilty of a breach of faith, which, by accentuating unemployment, and by raising prices of a manufactured commodity of supreme importance, admits of no defence. It states deliberately, and with full knowledge of the position, that, given the present rate of consumption, and calculating only on 10 per cent releases under the scheme, the world's stock of rubber will be totally inadequate, and a position of dangerous shortage is rapidly being approached.

If restriction is not abolished or so drastically amended as to provide quick releases as and when the price of rubber goes beyond the limits aimed at by the scheme, then the only alternative appears to be, the association concludes, to take steps to restrict consumption—an action manufacturers are loathe to take, for the obvious reason that international complications might arise.

BRITISH MOTOR TRADE PROTESTS RESTRICTION

The four most influential organizations connected with the automotive industry in Britain—Society of Motor Manufacturers & Traders, Royal Automobile Club, Commercial Motor Users' Association, and the British Cycle & Motorcycle Manufacturers and Traders' Union—have just issued a joint manifesto regarding the adverse effect on the interests they represent of rubber restriction.

"It is necessary," says the manifesto, "in the interests of all purchasers and users of commodities of which rubber forms a part, to emphasize that the object of the Stevenson scheme was to create an economic price, and its present results, which are accentuated every day, leave no doubt whatever that its consequences are to create an uneconomical price for tire equipment for every type of road vehicle whose owners will continue to pay, the price of the present restriction. It is surely the duty of the Government to do what is possible in the interests of rubber users, of which the motorist forms so large a part, to modify the scheme in order to ensure that the public are not compelled to pay an uneconomic price for rubber products."

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RUBBER ACE INNER TIRE ACQUIRED BY GOODRICH

It is announced that the B. F. Goodrich Rubber Company has purchased the patents, manufacturing and sales rights of Rubber Ace Puncture Proof Pneumatic Inner Tube and will manufacture and market this as a Goodrich Product in the future. As soon as sufficient production can be secured in the Goodrich plants at Akron, Rubber Ace will be distributed through all Goodrich branches throughout the country.

Rubber Ace is not a new product, having been made, sold, and used for more than five years. It is a patented sponge rubber inner tire, made of pure rubber and air. The inner tire is made in two sections—the main unit, conforming to the shape of the tire—and a wedge. The wedge provides the proper fit in the casing under proper compression. The Rubber Ace then acts much the same as the usual inner tube under correct air pressure. The features that have made Rubber Ace operate successfully have been the variable sized wedges and the manner of installation.

The demonstrated merit of Rubber Ace, combined with the facilities for development, distribution and service of the B. F. Goodrich Rubber Company, will undoubtedly add new impetus to puncture proof tubes and make them a staple instead of a novelty in the rubber trade.

J. C. LAWRENCE ELECTED PRESIDENT OF FAULTLESS

At the annual meeting of stockholders and directors of the Faultless Rubber Co., Ashland, Ohio, held on August 5, J. C. Lawrence was elected president of the company. He succeeds T. W. Miller, who has been president for the past 26 years.

The Faultless Rubber Co. is one of the oldest and most prosperous industries in Ohio. Its dividends to common stockholders never have been interrupted. Quick assets, as of June 30, 1925, were 26 times current liabilities. No money has been borrowed from banks in the past 10 years.

Mr. Lawrence is a son of Dr. and Mrs. F. F. Lawrence, 201 Sixteenth Ave., Ashland. He was graduated from Ohio State University in 1910. In addition to serving as president of the Faultless Rubber Co., he is chairman of the board of directors of the Racine Horseshoe Tire Co., Racine, Wis., and also chairman of the board of directors of the Commercial Chemical Co. of Tennessee at Memphis.

At the annual meeting of stockholders held recently, the following Board of Directors was elected: J. C. Lawrence, president; C. D. Hubler, treasurer; P. A. Myers, vice president; T. W. Miller, chairman of the board; I. L. Miller, secretary; E. F. Miller, factory manager; John S. Fleek and L. B. Williams of Hayden, Miller & Co., Cleveland; John C. Myers and Guy C. Myers of F. E. Myers & Co., Ashland; J. R. Nutt, pres. Union Trust Co., Cleveland, and F. L. Parker, president U. S. Whip Co., Westfield, Mass.

INCREASE IN STANDARD PRODUCTION INSUFFICIENT

A London Associated Press cable dated August 10 states that a dispatch to The Daily Mail from Kuala Lumpur, Malay, discussing the British Government's permission to raise the limit of the standard production of rubber from 450 pounds to 500 pounds per acre, commencing Aug. 1, says that it is the opinion of local experts that this will not substantially increase the exportation of rubber from Malaya.

It is doubtful, the correspondent adds, if more than 101,000 acres in Malaya are capable of yielding as much as 500 pounds each. Accepting these figures, the increase in the Malayan standard production would be 10,000,000 pounds.

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SYNTHETIC RUBBER TO BE MADE FROM CORN ?

According to an Associated Press despatch from Los Angeles where the American Chemical was recently in session, Dr. James F. Norris, president of the society, predicts a source of synthetic rubber made from corn.

"If continued high prices force tire manufacturers to appeal to the chemist," Dr. Norris said, "it is entirely possible that a method of manufacturing synthetic rubber from corn and wheat derivatives may be developed and the rubber plantation supplanted in some measure at least by the middle Western American farm."

"Several years ago," he explained, "the question of the synthesis of rubber became vital, and leading chemists of the world began a study of its manufacture. Meanwhile a great increase in rubber plantation production caused the price to fall and chemical research was abandoned.

"Now, however, the chemist again is entering the field, and it is among the possibilities that our research men will develop a valuable commercial rubber from acetone, from which the Germans made rubber during the war.

"Acetone is a by-product of butyl alcohol and butyl alcohol is produced from grain. In other words our automobile tires may yet be made from Kansas corn."

Dr. Norris pointed out that crude petroleum may be used as the base of synthetic rubber, in which case the corn and wheat growers of the Middle West will have to compete with the oil companies.

CRUDE PRODUCERS DEBATE FORWARD SALES POLICY

Divergence of opinion exists among rubber producers as to the advisability of selling forward, but, judging from the continued flood of announcements of fresh contracts, a considerable proportion of the various boards take the view that a bird in the hand is worth two in the bush. Rubber's present position being abnormal, it is impossible to forecast what it will be in six months' time. Much depends on whether the American demand will continue at the present rate.

The prices being secured in respect of 1925 contracts assure most of the companies concerned a fair margin of profit for those portions of crop sold, while the prices ruling for 1926 delivery mean a handsome return. Consequently, the policy of selling forward has much to commend it to producers.

One producer who has entered into certain forward contracts has decided for the present to refrain from further selling for future delivery in view of the heavy and, in his opinion, unjustifiable, discount on forward positions. Speaking at the recent meeting in London, J. L. Burt, who presided, said that if the high price was due to speculators, there might be some justification for the present position of the terminal market, but he believed the reverse was the case. The position of rubber, he added, was perfectly healthy and entirely due to the law of supply and demand.

Defending the policy of selling forward followed by the Dalkeith (Ceylon) Co. A. J. Gordon Field, the chairman, at the recent meeting, said that although the previous custom was to sell all the output in the London market, it was considered a mistake to adhere to that plan under altered circumstances. At the time the contracts were entered into the future was difficult to forecast. A point that is sometimes lost sight of is that the present shortage of supplies on the London market is largely, if not entirely, due to the heavy shipments that are being made direct to New York and elsewhere under earlier forward sales.

U. S. Rubber Adds Rubber Lands

The United States Rubber Company has acquired an additional tract of 6,000 acres of land from Belgian interests in Malaya. The deal was made through the company's subsidiary, the General Rubber Company.

The property acquired adjoins some of the company's other rubber producing properties in Malaya and is expected to reach the production stage next year. The company also has about 88,500 acres of rubber plantations in Sumatra making a total of 116,000 acres.

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CUSHION TUBE RULING MADE BY U. S. TREASURY

Cushion inner tires molded in size and shape to fit outer casings are dutiable, the Treasury Department has ruled, as parts of automobiles under Paragraph 369, Tariff Act of 1922, following T.D. 40619 of January 14, 1925. In a letter to the Collector of Customs at Detroit, Mich., L. C. Andrews writes as follows:

"It appears from previous correspondence on this subject that the articles are composed of rubber and are used in the place of the ordinary pneumatic inner tubing, and, in a decision dated January 14, 1925 (T.D. 40619), the department held that the merchandise is properly dutiable under Paragraph 369 as parts of automobiles, the classification by use prevailing over the general provision for manufacturers in chief value of rubber in Paragraph 1439 of the said tariff act.

"The department is of the opinion that the articles under consideration are in fact parts of automobiles. Indeed, Paragraph 369 of the Tariff Act, in providing for automobiles and parts thereof, excludes tires, which is persuasive of the fact that Congress recognized that if tires had not been expressly excluded from the paragraph they would have been dutiable under the said paragraph as parts of automobiles.

"In view of the foregoing, and to the end that there may be a judicial determination of the proper classification of the merchandise under consideration, and described in T.D. 40619, you are directed to continue to assess duty thereon under the provisions of Paragraph 369, and as it appears that the merchandise covered by the entries above enumerated was imported from Canada, and as Canada imposes a duty at the rate of 35 per cent ad valorem upon like articles imported into Canada from the United States, the department must decline to authorize a reliquidation of the entries mentioned for the purpose of assessing duty thereon at the rate of 25 per cent ad valorem, under Paragraph 1439 of the Tariff Act."

Manhattan Rubber Enlarges

The Manhattan Rubber Co., Passaic, N. J., has announced that it will make alterations and enlargements to its plant which will cost about $163,750.

Building "A" a four story brick building will be enlarged and altered. This building is one of the largest of the plant, covering eighty-four by 137 feet, while Building "O," fifty by sixty feet will undergo similar building operation. Building "S," the elevator building will be greatly improved and enlarged. This covers an area of fourteen by fourteen feet.

Work will begin as soon as the plans are complete, probably within the next few weeks.

Arthur F. Townsend is president of the Manhattan Rubber Manufacturing Company.

NEW ENGINEER FOR AKRON RUBBER MOLD & MACHINE

The Akron Rubber Mold & Machine Co. of Akron, Ohio, have secured the services of T. Henry Williams, who has had many years of experience in engineering work for the rubber trade.

Mr. Williams has been associated with the B. F. Goodrich Co. and the Birmingham Iron Foundry Co. of Derby, Conn., and has also been with local concerns for a number of years. He has designed many different rubber machines which are now being used very successfully by tire manufacturers. He will be a valuable addition to the Engineering Force of the Akron Rubber Mold & Machine Co.

Samuel Becomes Akron Representative

E. J. Samuel, formerly of Goodyear and Ajax, has been appointed Akron representative of Moore & Munger, manufacturers of Catalpo of 33 Rector St., New York City. Mr. Samuels will be located at 736 Second National Building, Akron.

Keystone to Make Golf Balls

The Keystone Rubber Mnfg. Co., Erie, Pa., has added the manufacture of golf balls and it is reported that the company has already an order for a million balls from A. G. Spaulding Co. An experienced golf ball superintendent has been hired and manufacturing will start shortly.

Perfect Beads

Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid or our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

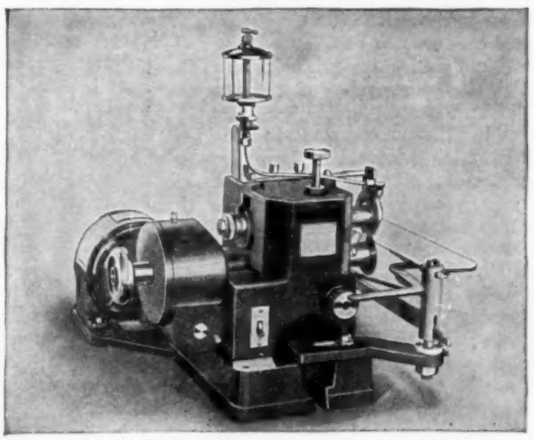
National Standard Company
Niles, Michigan

DOVAN
DIPHENYL-GUANIDINE

You can depend on the manufacturers of Reclaims to give you an unbiased opinion as to the best accelerator. Ask them what they think of Dovan Diphenyl Guanidine—the most efficient and economical accelerator for reclaimed stocks.

DOVAN CHEMICAL CORPORATION
THIRTY CHURCH STREET NEW YORK
REPRESENTED BY
J. A. Kendall, Akron, Ohio; J. E. Odell, Boston, Mass.; American Oil & Supply Co., Trenton, N. J.; T. E. O'Reilly, Ltd., Toronto and Montreal; Martin, Foyt & Milne, San Francisco and Los Angeles; Buckleton & Co., Ltd., 13 Rumford St., Liverpool, England.

WILLS ELECTRIC TRIMMING MACHINES



MODEL DE

Operate from Lighting Circuit
Shipped Ready to Run

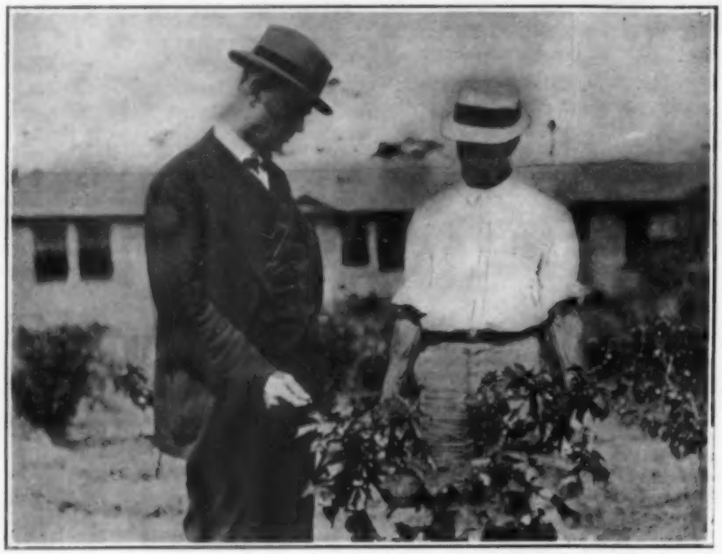
Designed to trim Heels, Soles and Mechanical Rubber Goods. Absolutely dependable in action. Extremely easy to operate.

SOLD EXCLUSIVELY BY

ARTHUR JACKSON WILLS CO.

Established 1915

NORTH BROOKFIELD MASS., U. S. A.



International News Reel Photo

Growing Rubber in Florida

M. A. Cheek (Left) plantation expert of the Firestone Tire & Rubber Co., and Alfred Keyes, Superintendent of the Governmental Experiment Farm near Miami, Fla., examining a flourishing sapling.

BRAZILIAN GROWERS EXTENDING OPERATIONS

Further increases in price and the consequent augmented interest in gathering and exporting crude rubber has brought as great a state of activity in the Brazilian market as has been seen at any time since the Middle Eastern plantation rubber first took supremacy in the world's markets away from the Amazon product, according to advices to the Department of Commerce from Rio de Janeiro. Brazilian business circles are enthusiastic as the result of the prosperity of the moment and the brighter outlook.

Sales in May continued to be well above normal, the total of shipments of rubber for the month being 2,629 metric tons, of which 1,868 tons went to the United States and the remainder of 761 tons to Europe. This is the first time since February that the United States has taken more than Europe.

Shipments for the first five months of this year show an increase of almost 25 per cent over last year; consignments to the United States have increased 4.5 per cent and to Europe 48.7 per cent.

Statistics show that exporters, all of whom buy on commission at the orders of New York or London importers, are holding their stocks at a minimum and are shipping the greatest possible quantities. Stocks on April 30 were 1,643 tons and on May 31, 767 tons, of which 150 tons were not in the hands of the exporters. Shipments during May totaled 2,692 tons, whereas receipts were only 1,753 tons.

Price gains on the Brazilian market during May were so great, in spite of the unusually high prices ruling at the beginning of the month, that for some days sales were made at prices larger, in terms of Brazilian currency, than any that have ruled since 1910. The Brazilian milreis, it is true, has suffered considerable depreciation since 1910; but the local purchasing power of the milreis has diminished to a much lesser extent than has the value of Brazilian currency on international exchange markets, with the result that the prices now being paid for rubber bring greater prosperity to the North of Brazil than the dollar or sterling prices would seem to indicate.

In spite of the fact that the operations of rubber gatherers have been steadily extended for some months, the rapid price gains of May have brought fresh enthusiasm and greater activity in the extension of operations. Estates that have lain abandoned for years are being brought into production each day. Advertisements have appeared in local newspapers for as many as one hundred rubber gatherers to work on a single estate. Men are coming in from Ceara and other Northern States to work in the rubber forests, and each river steamer that sails up the Amazon from Para carries new men and quantities of supplies.

Akron Wage Decrease?

It is reported that a wage decrease of 5 to 10 per cent was recently put into effect in the plant of Goodyear Tire & Rubber Co., in Akron. Other rubber factories in that district were expected to follow suit.

June Exports of Tires and Tubes

The export trade in tires and tubes, which was proceeding at a high level during the early months of 1925 reaching 158,302 casings valued at $1,837,845, 142,107 tubes valued at $239,062 and 11,204 solid tires valued at $268,898 in May, showed a marked decline in June. During the month ended June 30, there were only 126,934 casings valued at $1,514,708 exported; tubes dropped to 111,150 valued at $188,257, and solid tires to 8,717 valued at $217,413. This decline may be attributed largely to the unsettled state of the world's tire markets, resulting from rising prices which have been caused by conditions in the crude rubber market. Some importers may have followed the policy of increasing stocks in anticipation of rising prices, while others may be cutting purchases to a minimum. Argentina took 14,707 casings, 7,092 tubes, and 351 solid tires; Japan 12,115 casings, 9,364 tubes, and 1,222 solid tires; United Kingdom 11,549 casings, 10,742 tubes and 1,698 solids; Denmark 9,503 casings, 9,165 tubes and 190 solids Brazil 8,733 casings, 7,301 tubes and 123 solids. Other leading markets were Sweden, Mexico, Philippine Islands, Australia, New Zealand, Dutch East Indies, Norway, Cuba and British South Africa.

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SHIPPING CASES

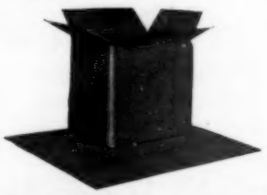
The MODERN and SATISFACTORY method for PACKING and SHIPPING.

Shipments can be made in units up to 90 lbs.

INEXPENSIVE STRONG
SPACE SAVING
PILFER PROOF
WATER PROOF DURABLE

We operate a department for SMALL, RUSH & SPECIAL ORDERS

Send in your inquiries. We shall be pleased to submit samples and quote prices.



Brooklyn Fibre Syndicate, Inc.
Decatur St. & Irving Ave., B'klyn, N. Y.
Foxcroft 3800

TIRE PRICES INCREASED ABROAD AND IN CANADA

Advices from Canada and foreign countries show that tire prices have advanced several times within the past few months. Montreal reported increases of 10% on tubes and 15% on casings on August 1; England, 15% on casings, 20% on tubes and 20% on solids on August 5; Switzerland, 25 to 30% on tires on August 3; Spain, 22% on tires on August 1; Egypt, new lists issued on July, percentages not given.

Seiberling Plans Addition

The Seiberling Rubber Co., Barberton, Ohio, is to build an additional factory building at a cost of $200,000 according to a recent announcement made by the company. It is expected that the building will be completed in four months. Production at Seiberling has been increasing steadily and additional manufacing facilities have been sought for some time. A 50% increase in production is expected upon completion of the new building, which will be 150 x 240 feet. July sales were $1,500,000 and sales for the year are expected to reach $12,000,000.

Correction on Goodyear Airship

In our last issue there appeared a caption over a cut showing the new Goodyear airship "Pilgrim," crediting Goodrich with its launching. This was an error which we desire to correct for although the contents of the news item stated in several places that the airship was manufactured and launched by Goodyear, some of our readers may have obtained a wrong impression of the true facts. [EDITOR.]

Yellow Slickers Take Trade by Storm

While the Rubber Clothing Manufacturers Division of the Rubber Association has been endeavoring to decide on a suitable slogan with which to push the sales of rubber raincoats, the industry has met serious competiton in the yellow 'slickers' which have lately been seen on every side—or should we say on every *back*—during the recent wet spell.

At first the slicker was only a boy and girl proposition and was considered a novelty. According to the *Daily News Record*, however, men and women of all age are now wearing these bright 'watersheds.' The investigation made by the above paper states that slickers come nearer to meeting the popular conception of an ideal raincoat than anything that has been produced in a long time. This garment is both novel and practical, twin elements in putting across anything to wear in the men's market.

The slicker costs only about $7 or $8 and it is predicted that they will be worn over sweaters during the late fall and early winter.

PLANS NEAR COMPLETION FOR CHEMICAL EXPOSITION

The management of the Tenth Exposition of Chemical Industries has announced the completion of many details of the exposition which will be held in Grand Central Palace, N. Y., during the week of Sept. 28 to Oct. 3, 1925.

Among the many entries for the Court of Chemical Achievement of the exposition are two well-known rubber accelerators entered by DuPont, pure cadium and zinc by N. J. Zinc Co., and many other products of interest to the rubber industry.

Another feature this year will be the industrial directory of exhibitors which will be arranged according to consuming groups, listing the products and equipment sold to each group by exhibitors. This directory is expected to be of great service to buyers in search of materials or equipment for it will contain several thousand pages of interesting information.

Tickets this year will be of two kinds. One will be distributed to exhibitors to be signed and given to guests. These will be good at any hour. The other will be general admission tickets which will only be good after 6 p. m. thus permitting the trade to enjoy the exposition during the afternoon when the floor is not crowded.

A new feature this year will be a Chemical Industry Dinner to be given late in the week at one of the near-by hotels at which over 1,200 are expected.

CABARRUS COTTON MILLS

M. L. CANNON
PRESIDENT & TREASURER

KANNAPOLIS, N. C.

Superior Quality Tire Fabrics

EGYPTIAN-PEELER
KARDED & COMBED
CORD & SQUARE WOVEN

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55 Worth St.

CHICAGO
327 S. La Salle St.

A. W. REID
Representative

EXPERIMENTS IN RUBBER GROWING IN NEW MEXICO

The official record of the United States Department of Agriculture for July 15, 1925, contains a statement regarding the new field station established at the experiment station of the New Mexico College of Agriculture and Mechanic Arts at State College, N. M.

Negotiations regarding the establishment of this station were completed the first of the year. About two and a half acres of land were put in condition for planting and irrigation. This land has been planted to special strains of cotton chiefly for seed increase. It is planned to increase the areas under cultivation each year. The story carried in the official record is as follows:

"New Field Station in Southwest to Study Cotton and Rubber Culture.

"Under the terms of a contract made this spring between the department and the New Mexico College of Agriculture and Mechanic Arts the former leased a tract of 40 acres belonging to the college. The department is undertaking experiments there in cooperation with the State college. The local farm bureau and chamber of commerce contributed $1,500 and $750, respectively, for the necessary construction work for the station.

"Experimental work in cotton and rubber will be the primary purpose, but studies will also be made of other crops particularly adapted to the southwest.

"The experiments in cotton will be directed chiefly toward the development of pure seed and the improvement of cultural methods. One of the most important phases of the work will be experiments to determine whether certain varieties of rubber plants can be grown successfully in that section.

"In addition to the 40 acres of mesa land leased by the department, there are about four acres under the ditch, which the department may take over under its contract if it is needed in the future A portion of the land already has been leveled and put under water by a connection with the college pumping system. Several plots have been planted in cotton.

"Owing to the shortage of men during the crop season the erection of buildings and the making of other improvements on the station will not be undertaken until next fall or winter. When this work is begun a resident superintendent will be sent there to take charge. Agents of the department will visit the station from time to time to inspect and supervise special work along different lines."

Foreclosure of Wenstone Rubber

The plant, equipment and land of the Wenstone Rubber Products Co., at Chippewa Falls, Wis., has been ordered sold at a foreclosure sale by Judge Connor in a recent ruling. The plant has been closed since December, 1924.

Akron Factories Make Additions

In addition to the new building announced by Seiberling to be erected in Barberton, several other Akron rubber companies have announced plans for new buildings. Firestone has filed plans for a warehouse to cost about $350,000 and General has announced that it will build a new heater room at a cost of $50,000. The Firestone warehouse will be 349 x 286 feet and will be four stories high. The Goodrich warehouse, being built at a cost of $1,000,000 is nearing completion.

RIMS APPROVED BY THE TIRE & RIM ASSOCIATION OF AMERICA, INC.

Size	July 1925 Number	July 1925 Pct.	July 1924 Number	July 1924 Pct.	7 mos. 1925 Number	7 mos. 1925 Pct.	7 mos. 1924 Number	7 mos. 1924 Pct.
			Clin.					
24x3	2,106	0.1	....	..	8,885	0.1	....	..
26x3	6,962	0.3	3,999	0.4	61,470	0.4	29,336	0.2
28x3	454	0.0	484	0.0	2,044	0.0	25,064	0.2
30x3	....	..	33,382	2.1	197,441	1.3	302,251	2.1
30x3 ½	390,682	17.3	697,492	54.3	3,110,445	19.7	6,271,981	44.5
31x4	14,478	0.7	....	..	519,684	3.3	644,160	4.5
			S. S. Pass.					
27x3 ½	136	0.0	219	0.0	1,648	0.0	2,584	0.0
28x3 ½	819,685	36.2	107,658	7.3	4,945,792	31.4	691,681	4.9
29x3 ½	....	..	....	..	144,390	0.9	6,753	0.0
30x3 ½	46,078	2.0	73,479	6.9	473,565	3.0	1,960,364	13.9
32x3 ½	4,279	0.2	3,362	0.3	19,112	0.1	43,867	0.3
28x4	318,462	14.3	63,605	4.0	1,772,170	11.2	470,140	3.3
29x4	185,495	8.2	39,739	3.1	926,565	5.2	474,632	3.4
30x4	206	0.0	10,736	0.8	284,811	1.8	122,771	0.9
31x4	....	..	....	..	1,393	0.0	23,972	0.2
32x4	22,909	1.0	65,740	5.1	170,530	1.4	1,156,166	8.2
33x4	4,099	0.2	6,129	0.6	11,311	0.1	95,526	0.7
34x4	203	0.0	....	..	503	0.0	805	0.0
29x4 ½	49,595	2.2	14,738	1.1	307,462	1.9	267,096	1.9
30x4 ½	176,862	7.8	62,820	4.2	839,420	5.3	200,362	1.4
31x4 ½	11,099	0.5	9,958	0.7	235,893	1.5	84,320	0.6
32x4 ½	31,207	1.4	77,872	5.8	396,393	2.5	912,149	6.4
33x4 ½	672	0.0	....	..	1,252	0.0	990	0.0
34x4 ½	5,012	0.2	7,833	0.6	73,992	0.5	170,250	1.2
36x4 ½	....	..	1,077	0.1	....	..	1,725	0.0
30x5	34,716	1.5	5,057	0.3	240,696	1.6	39,931	0.3
31x5	28,794	1.3	15,072	1.5	297,040	1.9	35,068	0.2
33x6	9,017	0.4	3,046	0.3	26,266	0.2	7,045	0.0
			Truck					
30x5	79,736	3.5	(See Note)		499,515	3.2	(See Note)	
34x5	5,305	0.2	6,030	0.4	70,275	0.5	70,913	0.5
32x6	6,539	0.3	1,900	0.2	83,079	0.5	13,419	0.1
36x6	4,170	0.2	2,056	0.2	36,393	0.2	18,039	0.1
34x7	1,235	0.0	1,085	0.1	12,893	0.1	3,539	0.0
38x7	211	0.0	103	0.0	6,396	0.0	5,079	0.0
36x8	803	0.0	5	0.0	7,803	0.1	922	0.0
40x8	1,012	0.0	1,492	0.1	8,811	0.1	3,535	0.0
40x10	250	0.0	....	..	604	0.0	....	..
44x10	102	0.0	....	..	402	0.0	....	..
TOTAL	2,262,661		1,316,168		15,796,308		14,156,435	

July 1925		July 1924		7 mos. 1925		7 mos. 1924	
Motorcycle	0.4	Motorcycle	0.4	Motorcycle	0.5	Motorcycle	0.4
Clincher	18.0	Clincher	56.4	Clincher	24.3	Clincher	51.1
Balloon	72.4	Balloon	23.3	Balloon	62.9	Balloon	16.6
Reg. S. S.	5.0	Reg. S. S.	18.9	Reg. S. S.	7.6	Reg. S. S.	31.2
Truck 20″	3.8	Truck 20″	0.3	Truck 20″	3.9	Truck 20″	0.1
Truck 24″	0.4	Truck 24″	0.7	Truck 24″	0.8	Truck 24″	0.6

NOTE: 30x5 rims not divided in 1924.

STOCKS

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Cleveland
Cincinnati
Toledo
Indianapolis
St. Louis
Omaha
Dallas

Use More Zinc Oxide

Be Sure It Bears This Label

AZO ZINC OXIDES

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AMERICAN ZINC, LEAD & SMELTING CO.

STOCKS

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Montreal
Chicago
Louisville
San Francisco
Los Angeles
New Orleans

AMERICAN TIRES LIKED BY GERMAN CONCERNS

The superiority of American tires recommends them for consumption in Germany, and a number of German concerns would welcome the representation of American makes, according to a report to the Department of Commerce by Trade Commissioner Daugherty, Berlin. The current import embargo, however, makes it impossible to secure permits at present.

Like the German automotive industry, the German rubber industry, because of the capital invested and the opportunity it offers to keep surplus labor employed, can expect a high degree of protection from the proposed tariff, now in course of revision. It is significant that the present tariff on rubber tires, further backed by an import "prohibition," or control, is relatively high, i.e., 360 marks per 100 kilos.

The import control has kept rubber tire imports at a minimum, while exports have been comparatively high. Generally speaking, import permits are only granted now for limited sets, and only after the authorities are satisfied that they are intended to equip the few foreign cars now in Germany. The local rubber tire industry has been able to export within a wide range against foreign competition and even effectively in as distant a market as Argentina.

The extent to which Germany has been a factor in exporting on the world market inner tubes and casings for automobiles, trucks and bicycles is reflected in comparative figures between 1922 and 1924. In 1922, Germany exported about 159,000 inner tubes and over 191,500 casings for automobiles and trucks, and 3,500,000 inner tubes and nearly 2,000,000 casings for bicycles. Figures for 1923 were, respectively, 226,000, 251,750, 3,500,000, and 2,100,000, while in 1924, they were 182,175, 143,000, 2,700,000 and 1,365,500.

The effect of currency stabilization in 1924, with resultant higher costs and price, is reflected in declining exports in that year. On the other hand, imports, under permit, were increased. Certain tires of Italian or Austrian origin, it should be noted, are given preference on this market, by reason of special agreements between Germany and these countries. In exchange for purchases of German autos, parts and accessories, a higher quota of imports is permitted from these countries. Thus, one finds many German automotive vehicles equipped with the Michelin tire, which—though a French manufacture—enters Germany from the Italian branch factory of the Michelin plant.

In 1924, Germany imported 6,461 and exported 4,724 single-tube tires.

Germany is selling its most distant market, Argentina, more inner tubes for cars and truck tires than any other single customer. In 1924, Germany sold Argentina 36,817 inner tubes, while exporting to Switzerland 12,575, Netherlands 12,399, Great Britain 11,318, British India 9,919, Dutch East Indies 9,527, and Denmark 9,325. The same relative markets obtained in 1922 and 1923.

Great Britain was the largest market for casings in 1924, taking 19,563, followed closely by Argentina, 19,403; Dutch East Indies, 9,653; and Netherlands, 9,013.

Great Britain bought 788,577 inner tubes for bicycle tires from Germany in 1924, Denmark 601,430, and Netherlands 566,075. Denmark bought 375,180 casings for bicycle tires from Germany in 1924, Great Britain 214,279, Netherlands 148,231 and Czechoslovakia 109,844.

Fake Dry Agents Get $40,000 in Rubber

Posing as prohibition agents, two thieves recently held up the watchman of a commercial garage in New York and escaped with two trucks loaded with about $40,000 of crude rubber. These robbers must have been reading the financial pages of the papers and decided that if rubber was selling at $1.23 a pound it must be worth stealing. Now that rubber is selling at only 81 cents, it is hoped that they will again read the papers and decide that the stuff is not worth peddling. Maybe the whole scheme is the work of advocates of the Stevenson plan who are desirous of reducing the slim stocks of rubber which are in New York at this time.

Foreclosure Sale

ENTIRE PLANT -- MACHINERY & REAL ESTATE

BRITISH-AMERICAN MFG. CO.

SPRINGDALE, CONN.

THURSDAY, SEPT. 3, 1925 At 12 o'clock noon Eastern Standard Time

ON THE PREMISES

Property comprises about 9 3-10 acres and is situated in Springdale, Fairfield County, Connecticut, along the line of the New Canaan Branch of the N. Y., N. H. & H. R. R. Buildings are of brick, in excellent condition; main building about 220 x 60 ft., up-to-date construction. Machinery consists of calenders, mills, spreaders, motors, shafting, etc. and all incidental machinery for rubber manufacturing plant including manufacture of automobile tops.

Further particulars may be obtained from

MYERS & GOLDSMITH, Attorneys

100 Broadway New York City

1926 CHEMICAL EXPOSITION TO BE HELD IN CLEVELAND

The Association of Chemical Equipment Manufacturers has announced that its Second Chemical Equipment Exposition will be held in the $6,000,000 Public Hall in Cleveland, May 10th to 15th inclusive, 1926.

The Exposition will follow the general lines of the recent First Chemical Equipment Exposition of the Association held in Providence which successfully fulfilled the organization's expectations.

Displays will be confined to equipment, supplies, accessories and materials essential to the processing industries. It will not include manufactured chemical products.

Attendance will be limited to technical and industrial men, including all ranks of industrial employees, and technical educators and students.

Primarily, admission will be by individual registration only, subject to such modifications affecting technical students and possibly other small and specialized groups as may be found advantageous. 2,000 Selective Attendance Already Considered Assured.

An attendance possibly tripling that at the Providence Exposition is anticipated by the Association. The Convention Board of the Cleveland Chamber of Commerce, after a thorough analysis of the Exposition's appeal to technical and industrial men made in collaboration with technical men and industrialists of standing in the Cleveland industrial area, has informed the Association that an attendance from that district of 2,000 is, insofar as such matters are subject to advance guarantee, definitely assured.

The Convention Board of the Chamber of Commerce has also informed the Association of the probable early announcement of sessions of several important national technical and manufacturing organizations that will be held the week of May 10th in Cleveland in conjunction with the Exposition.

Representative registrants at the Providence Exposition, both industrial executives and operating men and technical men, have communicated their appreciation of the Exposition to the Association and have uregd the continuance of the type of exposition restricted as to character of displays and as to attendance, there inaugurated.

Dreyley Bros. to Move

The Dreyley Brothers, manufacturers of soft molded goods, are moving their plant from Delaware to Newark, Ohio. They have accepted a building on East Indiana Ave.; offered by the Chamber of Commerce.

SAFETY COUNCIL ISSUES ACCIDENT STATISTICS

The National Safety Council has issued a report on accidents in the Rubber Industry for the six months period from July 1, 1924, to January 1, 1925. The figures are compiled by the Rubber Section of the Council and are based on operations recorded in 16 rubber factories.

Of those accidents which caused a loss of time there were a total of 1849 and those which caused no loss of time on the part of the injured there were reported 35,919. Of those which caused a loss of time 39 were due to accidents around mills, calenders and washers; 119 due to handling molds, 183 to falling material and 130 to trucking. The number of burns from heaters, presses and pipes were only 38.

A summary of the accidents for the above period compared with the six-month periods for the last four years shows that on an average only 0.872 days were lost per 1,000 hours worked whereas the average for the four years was 0.986, thus showing a decided improvement in accident prevention methods.

The averages follow:

FIRESTONE CELEBRATES 25TH ANNIVERSARY

On August 4, 1925, the Firestone Tire & Rubber Co., celebrated in Akron the 25th anniversary of the founding of the company. Starting in 1900 with a handful of men in a small plant at Miller and Sweitzer Avenues, the firm grew rapidly until it had acquired a new plant which later became the rim plant when the present buildings were erected. A new rim plant has been built, also Plant No. 2 and additions have been made to the building on the present location.

Sales for the first year were only $110,000 and at the end of the fourth year they had mounted to $460,000, which is a far cry from the $85,000,000 business in 1924. During this period the number of workers has increased from the original sixteen to over 12,000 distributed in its several plants and branches all over the world. Of the original employees only a few are still in the employ of the company and among those who have been with the organization from 20 to 25 years are: A. C. Miller, vice president; L. E. Sisler; Alfred Wegmiller; Miss V. M. Greeg, cashier; Dan Goodenberger and J. V. Herbert.

To Refinance Victor Rubber

Reduction in the working force of the Victor Rubber Company, Springfield, Ohio, has been ordered, pending a readjustment of the financial affairs of the company, according to an announcement made on behalf of the trustees who were appointed at a stockholders' meeting July 31. The trustees are H. B. McGraw of Cleveland, H. J. Robbin of Cincinnati, and Harlan C. West of Springfield. They were instructed by the stockholders to investigate the affairs of the company preparatory to liquidation and refinancing the concern. Effort will be made to raise $20,000 to reduce the indebtedness and provide additional working capital.

ACCIDENT SUMMARY

July 1, 1924 to January 1, 1925

Type of Product Manufactured	Standing Based on Severity Rating	Number of 1000 Hours Worked	Total Lost Time	Total No. Lost Time	Deaths	Perm. Total Dis.	Perm. Partial Dis.	Over 2 Weeks	Over 1 to 2 Weeks	One Week and Under	Total Days Lost	Perm. Total and Death	Perm. Partial Dis.	Over Two Weeks	Over 1 to 2 Weeks	1 Week and Under	Accidents Per Million Hours Worked	Days Lost Per Thousand Hours Worked
Mech. Gds.	1	40	None	4	..	..	..	None	None	None	None	....	....	None	None	None	None	None
Mech. Gds.	2	1,650	33	733	..	..	1	11	5	16	1,014	....	300	588	66	60	20	0.061
Tires & Mech. Gds.	3	680	6	464	..	..	..	3	0	3	70	....	....	53	0	17	8.82	0.103
Footwear	4	9,658	104	2,810	..	..	1	not Available			2,284	....	375	1,472	258	179	10.8	0.237
Mech. Gds.	5	331	5	26	..	..	..	2	1	2	80	....	....	60	14	6	15.1	0.24
Tires	6	4,731	62	3,795	..	..	2	20	5	35	1,881	....	900	810.5	66	104.5	13.11	0.398
Tires	7	1,372	42	1,717	..	..	..	19	10	13	770	....	....	624	105	41	30.64	0.561
Footwear	8	6,368	102	1,707	..	..	2	23	14	63	4,454.5	....	3,400	709.5	146.5	198.5	15.97	0.697
Tires & Mech. Gds.	9	5,083	233	4,647	..	..	3	48	42	140	3,879	....	1,000	1,935	432	512	45.90	0.76
Tires & Mech. Gds.	10	5,413	47	3,622	..	..	4	9	4	30	4,477	....	4,100	229	39	109	8.7	0.827
Tires & Footwear	11	717	12	565	..	..	1	4	2	5	645	....	300	301	24	20	16.7	0.90
Tires	12	1,040	39	2,027	..	..	1	14	11	13	1,427	....	600	653	113	61	37.5	1.37
Mech. Gds.	13	7,212	143	2,876	1	..	3	not Available			13,044	6,000	4,500	2,145	183	216	19.8	1.809
Tires & Mech. Gds.	14	14,826	838	5,774	..	..	13	292	152	381	26,784	....	15,450	8,516	1,468	1,350	57.2	1.81
Tires	15	7,274	152	4,869	1	..	3	not Available			13,371	6,000	5,000	1,880	296	195	20.9	1.838
Misc.	16	627	31	263	..	..	2	10	5	14	1,482	....	1,200	180	45	57	49.44	2.36
Total—second Half	1924	64,040	1,849	35,919	2	..	36	455	251	715	75,662.5	12,000	37,125	20,156	3,255.5	3,126	23.16	0.872
First Half	1924	61,554	1,600	24,935	2	..	29	495	296	778	50,145.5	12,000	15,103	17,610.5	2,900.5	2,531.5	25,96	0.814
Last Half	1923	69,192	1,850	....	5	..	26	528	332	959	79,593.5	30,000	24,450	17,883	3,510	3,750.5	26.73	1.15
First Half	1923	65,080	2,332	....	7	1	52	547	417	1,308	97,411	48,000	23,473	17,176	4,460	4,302	35.83	1.50
Last Half	1922	62,236	2,314	....	2	..	35	601	361	1,315	66,552	12,000	26,955	19,201	3,968	4,428	37.18	1.07
First Half	1922	60,916	2,117	....	1	..	17	573	317	1,209	40,838	6,000	9,996	17,046	3,630	4,166	34.75	0.67
Last Half	1921	47,509	1,309	....	3	..	25	407	198	676	54,764	18,000	18,001	14,682	1,932	2,149	37.60	1.15
First Half	1921	35,592	887	....	1	..	12	12	138	394	23,258	6,000	....	....	....	....	24.80	0.65
Grand Total, 4 yr.	....	447,109	14,258	60,854	23	1	231	3,948	2,310	7,354	489,224.5	....	....	....	....	....	29.50	0.986

WM. M. BALCH RETIRES FROM FAULTLESS RUBBER

It is announced that William M. Blach, vice president of the Faultless Rubber Co., Ashland, Ohio, has resigned and will retire from the company.

Mr. Balch has been active in the management of the Faultless Rubber Company for fifteen years and has been a great factor in its growth and development. He enjoys a wide acquaintance in the United States particularly with the wholesale drug trade and is probably the best known man to the trade in general in the rubber sundry industry. He has been honored by the Rubber Association of America, a member of the executive committee for many years, chairman of many committees of importance to the industry and was twice elected president of the division.

He enjoys the respect and confidence of the trade, among others, his competitors to an unusual extent. His business principles have been accepted and endorsed and by request he has addressed many sales conventions and other gatherings in practically all large cities and brought to his company, through his efforts a great amount of prestige.

He is a member of the Masonic club, the Ashland Country club, the Colonial club, superintendent of Trinity Lutheran Sunday School and past president of the Ashland Rotary club.

FLOWERS RUBBER

You'd never know it, would you? The roses shown in this illustration are made of rubber and scented like the original flowers. This basket of roses was presented to Queen Mary of England who in turn gave it to a hospital. The flowers are washable.

Converse Gets Large Contract

A $50,000 contract to supply cord tires to the City of New York was recently awarded to the Converse Rubber Shoe Co., Malden, Mass. Delivery is to begin at once, it is reported. Tire production at the Converse plant is at a maximum and no let-up is predicted for some time.

McGraw Plant May Reopen

Efforts are being made by the East Palestine Industrial Board to have the plant of the McGraw Tire & Rubber Company reopen this fall for the manufacture of tires. The plant has been under the control of a receiver for about two years and interests in East Palestine are endeavoring to get the receiver and the Creditor's Committee to agree to a reopening. Due to the absence of many members of the Creditor's Committee it has not been possible to obtain their ideas on the plan but negotiations will continue as soon as possible.

Kleinert Plant Busy

Despite the high prices of crude rubber and the usual let-up experienced at this time of the year, the plant of the I. B. Kleinert Rubber Co., in College Point, L. I., is working at capacity with every assurance that orders on hand at this time will keep the plant operating for the balance of the year. An ample supply of rubber is on hand and no increase in prices is contemplated. The concern manufactures dress shields, baby pants, sheeting, hose supporters, tourist cases, round garters, etc. Victor Guinzberg, president, recently returned from Europe after a stay of ten weeks. While in London, Mr. Guinsberg supervised the removal of the company office there.

Tew in Charge of Tire Production

J. D. Tew, who has been in charge of Goodrich tire production since 1918, has been appointed assistant works manager of the B. F. Goodrich Company.

Since the resignation of H. K. Raymond, vice president in charge of production, President B. G. Work has been the Goodrich works manager. In Mr. Tew's new position he will function directly under Mr. Work and will have charge of all production departments.

Mr. Tew began work in the Goodrich factory in 1906 and in 1910 he spent a year in England studying cord tires. On returning he was placed in charge of cord tire production at the Goodrich factory, which position he held until 1918. Mr. Tew is a resident of Hudson, Ohio. He was born in Jamestown, New York, in 1882, and graduated from Harvard in 1905.

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CARTER BELL STANDARD SINCE 1898 RUBBER SUBSTITUTES
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BRITISH TIRE EXPORTS SHOW HEAVY INCREASE

The number of automobile casings exported from the United Kingdom during the first half of 1925 was 424,801 valued at £1,049,760, according to official British export statistics. This is an extremely heavy increase over the rate of shipments in 1924; British exports for all of 1924 numbered only 550,263 valued at £1,379,083. The leading markets during the half year were Irish Free State 45,770, British India 37,874, Brazil 29,547, British South Africa 26,842, Australia 23,053, Argentina 22,291, Denmark 21,073, Sweden 18,637, Netherlands, 18,066, Italy 15,552, Mexico 14,485, Cuba 13,834, British Malaya 11,940, and British West Africa (total) 11,866.

New Incorporations

F. Lester Kittle, Inc., New York City, has been chartered at Albany with 100 shares no par value to deal in crude rubber and kindred products. Frank Lester Kittle, Grand View, N. Y., David Scheinker, 1157-46th St., Brooklyn, and Naomi Ransen, 600 West 183rd St., New York City, are the incorporators.

CHANGES IN STOCK

Dunlop Tire and Rubber Corporation, New York City, has filed a certificate in the office of the secretary of state authorizing an increase and change in par value of its stock from 260,000 shares of which 60,000 shares have a par value of $100 each and 200,000 shares are no par value to 260,690 shares of which 690 are shares of 8 per cent cumulative preferred stock $100 par value, 60,000 shares second preferred stock $100 par value and 200,000 shares common stock no par value.

* * *

Kase-Quinby Rubber Co., Inc., New York City, has increased its capital from $150,000 to $300,000.

* * *

Kokomo Rubber Co., Kokomo, Ind., has reduced its capital stock from 20,000 shares of no par value to 13,000 shares, no par value.

No—Goodrich Has Not Bought *The Rubber Age*

The other morning the Associated Press in New York called up the offices of THE RUBBER AGE to verify a report which they had received that this paper had been bought by the B. F. Goodrich Co.—of course, we had to explain that Goodrich had bought the Rubber Ace Corporation, (details of which will be found elsewhere in this issue) and not THE RUBBER AGE. If any of our readers see an Associated Press dispatch published in their local papers stating any facts on this matter other than given in this item, they will understand that the error was caused by the similarity in names. (EDITOR).

Engineers Meet in Akron

Over 250 prominent engineers from all parts of the country met in Akron during the first week in August to attend the 23rd Annual Convention of the Universal Craftsmen Council of Engineers. H. H. Garman, Engineer at the Goodyear plant was Chairman of the Arrangements Committee with W. H. Shelton of Goodrich and G. McMillen of Goodyear as assistants. Among the interesting features of the meeting was a tour of the Goodyear, Firestone and Goodrich plants.

R. F. Browning

After an illness of eleven days, Rufus F. Browning, chemist of the Philadelphia Rubber Works Co., Akron, Ohio, died on August 4. Mr. Browning was graduated from Akron University and had worked with the Philadelphia Rubber since being graduated. He was a member of the American Chemical Society, Henry Perkins Lodge No. 611, F. & A. M., Washington Chapter No. 25, R.A.M. and Yusef Khan Grotto. He was 32 years old and is survived by his wife, son and mother.

G. F. Berger

The Illinois Tire & Rubber Co., 2649 Claybourn Ave., Chicago, Ill., manufacturers of tires, tubes, mechanicals and hard rubber goods announce with regret the death of Dr. G. F. Berger, vice president and treasurer of the company on August 4, 1925.

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See Report of BUREAU OF MINES on Georgia Clays.

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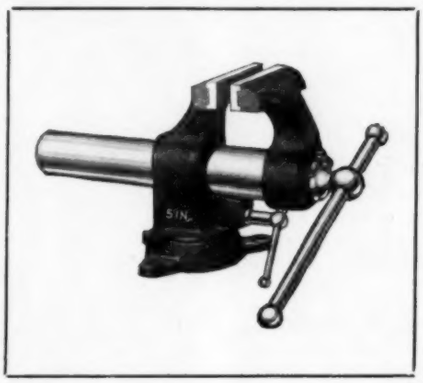
Cleveland, O. McIntyre, Ga.

FACTORY EQUIPMENT

A BENCH VISE MADE OF STEEL DROP FORGINGS

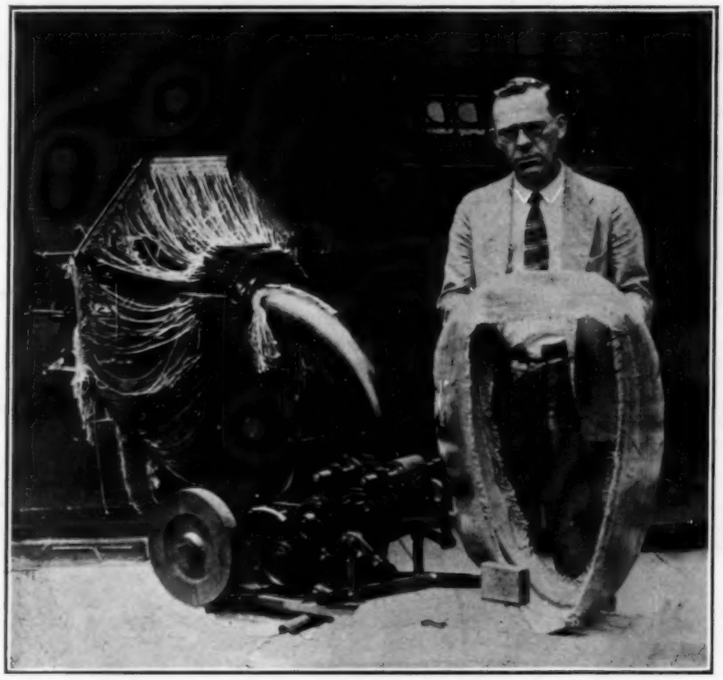
Under the trade name of "Dropfo," a vise that is made entirely of drop forgings, excepting only the handle, is now available.

Each part is machined to be interchangeable with the same part on any other vise of the same size. The jaw plates are knurled and forged under the hammer and doweled onto the jaw. Thus it is possible to replace the jaw plates, which are naturally subject to wear.



The Dropfo Vise is lighter in weight than the old-fashioned cast iron type. It is made with a swivel base and wedge lock that is quick to set and automatic in tightening up, and has a grip that cannot shake or break loose. It is also made in the stationary type.

The Dropfo Vise is made in four sizes: 3 inch with jaws opening 5½ inches; 4 inch with jaws opening 6 inches; 5 inch with jaws opening 8 inches; and 5 inch heavy duty with jaws opening 8 inches. The vise is manufactured by The Fulton Drop Forge Company of Canal Fulton, Ohio.



New Ingham Tire Fabric Loom

The illustration shows the new tire fabric loom invented by Emanuel Ingham of London, who recently arrived in the United States and is now in Denver. Mr. Ingham has left a model of his loom at the National Museum in Washington (Director Lewton shown beside loom) to be kept there if they prove practical and are adopted by manufacturers in this country. Plans are now being made for the marketing of this loom in England. The loom builds up a fabric by winding into a three ply fabric and is said to be easy to operate.

WATERMAN NOMINATED FOR MAYOR OF NEW YORK

Frank D. Waterman, president of the L. E. Waterman Co., Seymour, Conn., manufacturers of fountain pens, has been nominated for the Mayoralty of New York City on the Republican ticket in opposition to the nominee of the Democratic party to be chosen between the present incumbent, Mayor J. H. Hylan and James Walker, Democratic State Senator, in the direct primaries to be held in September.

Mr. Waterman came into prominence last year when he started a campaign to speed up subway construction in New York by forming a committee which secured over 160,000 signatures calling on Mayor Hylan to "Say It with Shovels."

Mr. Waterman entered the business founded by his father immediately after his college days. Interested in foreign trade, through the business in which he was engaged, he gave much study to it. As a member of various committees of the Merchants' Association he had opportunity to delve deeply into municipal problems. But until his associates forced him to lead the subways fight he had never put his municipal studies into actual practice.

Handled Public Petitions

When he launched his effort to make vocal the irritation of subway riders against the Administration's policy of delaying subway building, a delay chiefly occupied in debates with the Transit Commission, Mr. Waterman appealed to Mayor Hylan to drop disputes and "dig." He began to circulate petititons so that the public might be able to have some say in the matter.

The Mayor countered by circulating a petition of his own in favor of buses. Waterman's idea was popular, however, and the signatures to his petitions reached a figure that had its effect on the City Hall.

Mr. Waterman, who had sent out 18,000 petitions, each having space for 200 signatures, had 40,000 names a week after the petitions went into the mails. The Mayor finally took the initiative which brought about favorable action in the Board of Estimate and Apportionment on important sections of the proposed lines.

Mr. Waterman lived for eighteen years in Brooklyn, coming there in 1892 from the Middle West. He now lives in Manhattan. He is married and a son served throughout the war in the Twenty-seventh Division, which was composed exclusively of New York National Guardsmen. Mr. Waterman served as Chairman of the New York War Savings Committee for a year during the war. He is a member of The Lambs and the Lotos and Friars Clubs.

Shoe Order for Converse

The Converse Rubber Shoe Co., Malden, Mass., has secured an order for 20,000 pairs of athletic shoes from the A. G. Spaulding Co. It is said that this is the largest order for this type shoe ever placed by Spaulding with Converse.

Possibilities for Production of Para Rubber in the Philippine Islands

Following is a summary of the report on the Philippine Islands issued by the Department of Commerce on August 10. The report, according to Julius Klein, Director of the Bureau of Foreign and Domestic Commerce, was prepared by Special Agent C. F. Vance, Special Agent A. H. Muzzall, and Assistant Trade Commissioner J. P. Bushnell, of the Department of Commerce, with a section on soils by Mark Baldwin, of the Department of Agriculture, treats of the present small rubber industry in the Islands and discusses the extent to which the industry might be expanded. The findings indicate that the climatic conditions of the Philippines are as favorable for rubber planting as are those of the Middle East. As regards soil, topography, and accessibility, there are large areas that, if utilized for rubber production, would be superior to the lands now generally available for new plantations in Sumatra and Malaya, the principal rubber-producing districts of the world at the present time.

With a population of over 10,000,000 people in the Philippines, it is believed that the more congested Provinces, together with local labor, might ultimately furnish a sufficient force to produce, when mature, 70,000 tons of rubber yearly. The present land laws, designed to retain a diffused land ownership, do not lend themselves to large-capital operations in rubber plantations. Nevertheless, moderate-sized plantations are possible with foreign capital, and moreover the small native planter, with proper encouragement, might become a producer of important further supplies.

The prosperity of the native planters in certain parts of Netherlands India, where rubber planting has been fostered by the Dutch authorities, prompts the thought that the same means might be taken in encouraging Filipinos to plant rubber with their annual crops grown on small forest clearings. Such a plan would be in harmony with the present land policy of the Philippine government by helping to solve the problem of inducing the so-called caingin farmer to become a permanent landholder and, if carried out, would increase the productive wealth of the Islands.

This report is the third of a series on crude rubber issued under authority of the Sixty-seventh Congress, which appropriated funds for the investigation of raw materials wholly or largely under foreign control. The first publication, Trade Information Bulletin No. 180, entitled "Marketing of Plantation Rubber," by Special Agent J. J. Blandin, was published in January, 1924; the second, Trade Promotion Series No. 2, entitled "The Plantation Rubber Industry in the Middle East," by Special Agent David M. Figart, in June, 1925. Reports covering other regions are being prepared for publication.

THE crude-rubber survey of the Philippine Islands covered eight months' field work and comprehended a study of the economic, physical, and political conditions that would be of interest to persons contemplating investing in rubber plantations there. The party detailed to conduct the survey made its major studies in the southern group of islands as the locality most favorable for rubber production.

In the course of the investigation the departments of the Philippine government cooperated in supplying information requested; data and assistance secured from the Bureaus of Forestry and Science were especially valuable. In the field work over 30 agricultural properties were visited, besides other industrial projects, and advantage was taken of every opportunity to consult the leading planters and business men of the Islands.

Four Year Old Rubber Trees with Cover Crop

Since rubber planted in the Philippines will come into competition with that from the present producing regions in the Middle East,[1] it is thought advisable in this summary to contrast the two regions with regard to their physical and economic conditions.

Present and Potential Areas

There are four small rubber plantations now existent in the Philippines, aggregating 2,890 acres, of which approximately 600 acres are being tapped.

On the islands of Mindanao, Basilan and Jolo, there were located regions comprising more than 1,500,000 acres with favorable climatic conditions within which large areas with suitable soil and topography could be selected for rubber planting. Other near-by regions with similar conditions, not covered in this report, would make important additions to this acreage. Much of this land is within easy reach of water transportation; some needs access roads.

Undeveloped rubber lands are still to be had in Malaya, Sumatra, Borneo, and Indo-China. However, easily accessible areas with favorable topography in Malaya and Sumatra are each year becoming more difficult to obtain.

The investigation shows that as regards growth of trees and yield of latex the few existing plantations in the Philippine Islands compare favorably with some of the best plantations in the Middle East.

Temperature conditions in the Philippines are very similar to those of the Middle East where rubber is being grown

[1] For details of the Middle East industry see "The Plantation Rubber Industry in the Middle East," by David M. Figart, issued by the Bureau of Foreign and Domestic Commerce, Washington, as Trade Promotion Series No. 2.

successfully; as are also the total rainfall and its distribution throughout the year, though certain localities both in the Middle East and in the Philippines have occasional dry seasons not serious in character. Storms known as typhoons occur in the Philippines; some of these are destructive, some are not. North of latitude 8° both kinds are experienced; south of this latitude destructive typhoons are absent and the nondestructive kinds infrequent. Local winds that may do slight damage to Hevea plantations are to be expected in any rubber country.

Climatic conditions in the Philippines cause rapid weathering of the parent rocks that form the soil. The parent rocks of Malaya and Sumatra are, in the main, acid igneous and siliceous sedimentary and metamorphic rocks. While soils from like parent material are encountered in the Philippines, there are large areas with soils weathered from basaltic rocks. When developed, such soils show a finer and more uniform physical texture than those of Malaya and Sumatra. This texture is such as to allow good aeration at greater depths, greater capillary power, greater conservation of organic matter, and better resistance to surface wash. Indications are that such soils are more suitable for rubber and other plantation projects than are those on which the bulk of the world's rubber is being produced today.

Grass and Forest Lands Compared

Both the Middle East and the Philippines were originally covered with virgin jungle. Due to the shifting method of agriculture practiced by the native people, considerable areas in both regions are now covered with grass, known in the Philippines as cogon and in the Middle East as lallang. In the Philippines there are much larger areas of unoccupied grasslands than in the Middle East. If grasslands with gentle topography are chosen for plantation development in preference to forest lands, opening costs may be considerably lower. The soil expert's report shows that there is no physical difference in the character of forest and grassland soils provided such soils have the same origin and development. Analyses indicate that there is a greater amount of organic matter in the latter than in the former.

In Malaya and Sumatra the largest proportion of the rubber was planted on land cleared of virgin jungle. Diseases originating in the stumps of the jungle trees spread to the Hevea trees and on some areas resulted in heavy losses. To combat the spread of such diseases the removal of practically all stumps and roots of the original jungle from the soil is practiced by European plantations throughout most of the Middle East. This process of clean clearing adds greatly to the cost of opening. The rubber planted on virgin forest land in the Philippines shows almost negligible losses from root diseases, even though clean clearing has not been practiced. Rubber planted on grass and other lands kept clear of tree growth for some time is generally free of root diseases.

The commercial development of the timber resources of the Philippines, made possible by the introduction of steam logging, has demonstrated that tropical timbers can be utilized on a much larger scale than was formerly the case. An arrangement with logging companies whereby prospective rubber planters can acquire the timbered lands after they have been cut over may reduce the costs of preparing such lands for planting. Exploitation of forests on a large scale by modern methods of logging has not yet been introduced in the Middle East (except in British North Borneo).

Capital and Production Costs

The capital cost of bringing European-owned rubber plantations into bearing in the Middle East varies greatly, with an average around $250[1] per acre. Opening costs of rubber planted on forest soils, including clean clearing, full equipment of buildings, roads, etc., will average $300 per acre. The costs are less when grass or second-growth lands are opened. Further economies are possible through the employment of less intensive methods and more modest equipment. Location as regards transportation facilities and the topography of the country also affect costs. Some of the European-owned plantations in the Middle East grow coffee and tea in connection with rubber—coffee in Java and to a less extent in Sumatra, and tea in Ceylon.

Native-owned plantations in the Middle East are brought into bearing at a price equivalent to labor costs—probably about $60 to $70 per acre. Generally speaking, the native there cuts and burns a bit of jungle and plants coffee, rice, or other crops along with the rubber; when the rubber trees are a few years old another piece of jungle land is opened. Native areas in rubber are estimated to cover one-third the planted area in the Middle East.

No complete book figures are available for the actual capital cost of bringing rubber into bearing on the few small plantations in the Philippines; incomplete figures and the methods used indicate that it is somewhere between $100 and $200 per acre. For forest lands clean clearing has not been practiced. Catch crops have been raised on part of the area planted; such crops, together with the grazing of cattle among the rubber, have aided materially in reducing upkeep expenses. A gauge of the low opening costs on grasslands that might be attained can be found in the $25-per-acre contracts that have been made for planting coconuts. Favorable physical conditions in the Philippines indicate that, if the generally accepted standard methods of the Middle East are used, even with higher labor costs the capital cost of opening

[1] The dollar mark as used throughout this report refers to United States currency unless specifically stated otherwise.

Four Year Old Rubber Trees, Rio Grande Estate, Philippines

in the former region might be kept on a competitive basis with those regions now available for new rubber plantings in Sumatra and Malaya.

Production costs on the small areas being tapped in the Philippines, while not conclusive, indicate that by the introduction of certain economies not generally accepted in the Middle East rubber is produced at a slightly lower cost level than the average of the older area. It would seem that by taking advantage of the experience of the East and with the added asset of better natural conditions present in the Philippines rubber can be planted and produced at a figure comparable to the average production costs of the Middle East.

Sources of Labor

Indigenous labor forms a very small proportion of the working force on European-owned estates in Malaya, Ceylon and Sumatra. The first two of these obtain most of their labor from South India, and third from Java; in both India and Java the labor supply is more than ample to meet the present demand. There are no restrictions in the Middle East against the importation of Chinese labor.

In the Philippines the present plantation force is local or obtained from adjacent Provinces. It might ultimately be possible to mobilize 100,000 laborers for plantation work in the Islands; of this total 85,000 would be supplied by the more northern Provinces and 15,000 locally. This number would be sufficient to care for upward of 500,000 acres, capable of producing when mature 70,000 tons of rubber. Present laws do not permit the importation of Chinese or other oriental labor. The Philippine legislative body has power, however, to pass laws permitting such importation, subject to the approval of the President of the United States.

Cost of recruiting from the southern islands is said to average $10 per laborer. It cost the Philippine government from $8 to $20 to transport homeseekers from Luzon and Cebu to Cotabato in 1922. Cost of recruiting in the Middle East is as follows: Recruiting Indians for Ceylon and Malaya, $10; recruiting Javanese for Sumatra, $48; recruiting Tonkinese for Chochin China, $18; recruiting Chinese for Borneo, $50.

Possible Sources and Supply of Labor

Provinces	Total population	Laborers: Total number	Laborers: Per cent procurable	Laborers: Number available
Abra	72,731	12,176	15	1,826
Antique	154,999	22,884	10	2,288
Batanes	8,214	4,500	5	225
Bohol	258,387	35,886	12	4,306
Bulacan	249,292	39,274	5	1,963
Cagayan	190,129	4,187	5	2 9
Capiz	292,665	28,500	12	3,420
Cebu	855,065	200,000	15	30,000
Ilocos Norte	219,129	61,914	10	6,191
Ilocos Sur	217,406	33,946	10	3,394
Laguna	195,546	25,154	5	1,257
La Union	160,590	24,452	10	2,445
Leyte	597,950	49,200	10	4,920
Nueva Ecija	227,096	54,181	12	6,501
Pampanga	257,620	27,336	5	1,366
Pangasinan	565,922	108,560	10	10,856
Romblon	64,610	5,000	10	500
Samar	379,575	6,000	5	300
Siquijor (subprovince)	56,774	16,477	10	1,648
Tarlac	171,876	24,000	5	1,240
Total	5,295,576	783,627	[1]11	84,855

[1] Average.

Wage Scales

The basic labor scale in the Middle East is 20 cents U. S. per day for Indians and Javanese; for Chinese it is 35 cents U. S. Housing, sanitation, etc., under existing legislation, and recruiting charges, when included in labor costs, bring the total cost of Indian and Javanese labor up to 35 cents but do not affect the Chinese because not applicable to them. The present basic wage in the southern Philippines for agricultural labor is 40 to 60 cents; there is, in addition, a small charge for recruiting when labor is obtained from other parts of the archipelago.

The higher degree of intelligence and the better living conditions, with their attendant advantage of greater physical vigor, lead many to believe that Philippine labor is more efficient than the general run of labor in the Middle East. Others maintain that these advantages are more than offset by the better discipline of Eastern labor. It is generally admitted that the chief drawback of Philippine labor is its independence, usually expressed in working part instead of full time, thus causing a high turnover. Competent observers maintain that under proper guidance Philippine labor has improved greatly in this respect, and that it is only a question of time when the disadvantage will be overcome. One of the forces contributing toward this end is the increasing wants of the laborer; formerly he could satisfy his wants by working, say, three days a week; now he is gradually lengthening his period of work to meet newly acquired desires.

Health and Sanitation

Quantitive comparison of the health conditions of the Philippines with those of the Middle East can not be given because of the absence of reliable mortality rates covering the rural districts of both regions. A comparison of the mortality rate of the city of Manila with that of Singapore would seem to indicate that the health conditions of the Philippines are better than those of British Malaya.

In the Philippines the predominating Christian population, the higher percentage of literacy, the efforts of the schools to teach hygiene, and the effective propaganda work of the Health Service all tend to make for better health control. In the Middle East the lower intelligence of the mass of the population, in some instances complicated by religious prejudices, increases the difficulty of imposing health measures. On the whole the cost of sanitary measures in the Philippines ought to be less than in Malaya, Sumatra, and elsewhere in the present rubber-producing regions.

Little legislation compelling planters in the Philippines to carry out sanitary measures on behalf of their labor exists, whereas sanitary control is compulsory in the main centers of rubber production of the Middle East.

Land Laws

Land laws in Sumatra allow leases of practically unlimited area for 75 years, subject to renewal for 50 years more. Land leases in Malaya are perpetual and are unlimited as to area.

Under the present land laws of the Philippines a corporation can purchase 1,024 hectares (2,530 acres), or a corporation or an individual can lease 1,024 hectares for 25 years subject to renewal for two additional periods of 25 years each. While the law does not specifically state that a corporation can purchase one plot of 1,024 hectares and lease another of the same size, it is possible that the law would be interpreted favorably in this regard, in which event the limit to the amount of land under the control of a corporation would be 5,060 instead of 2,530 acres.

The maximum limit of area is too low for corporations wishing to undertake plantation projects on a large scale but would not in itself deter individuals or corporations that have less ambitious plans. The maximum term of lease, limited as it is by the present law to 75 years, might prevent capital from selecting this region in perference to others. However, the Philippine Legislature has power to make grants of lands with more favorable terms, subject to the approval of the President of the United States.

Taxes and Duties

Taxation is dependent on the financial condition of a country. In the Philippine Islands, during the decade 1914 to 1923 expenditure exceeded revenue only twice and imports exceeded exports only twice. The bonded debt is given as $77,000,000, about $6.50 per capita, compared with nearly $10 in Netherlands India. Generally speaking, the Philippines are in a better financial position than Netherlands India and compare favorably with Malaya and Cochin China. Most Eastern countries will experience a gradual readjustment of their budgets owing to decreasing revenue from opium, and new taxes will be levied in other channels; this problem is not present in the Philippines.

There are no export duties at the present time on plantation rubber in the Philippines, Netherlands, East Indies, or Indo-China. Export duties are levied in all the British possessions in the Middle East, where also measures of temporary duration restricting the exportation of rubber are in force. The Philippines and producing regions other than the British possessions have no such restrictions.

VULCANIZATION & ACCELERATORS

By Andre Dubosc

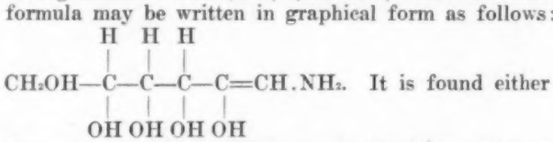
PART II (*CONTINUED*)

Natural and Mineral Accelerators

Classification of Rubber Proteins—Action of Glucosamine in Latex—Origin of Modern Organic Accelerators—Spence and Ostwald on the Theory of Adsorption—Use of Impurities in Rubber

N accordance with the information which has been given in the last issue, which unfortunately is not as accurate as it should be, the protein matters that exist in the rubber gum appear to belong to three different groups, namely, glucosamine, nucleo-protein and peptones. That is there are present in the rubber mass two conjugated proteins and one derived protein. The glucosamine seems to be the protein to which the greatest importance is attached.

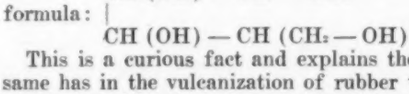
Glucosamine or chitosamine or amino dextrose has the following formula: CH_2 (CH) (CH.OH)$_3$ CH.NH_2.CHO. This formula may be written in graphical form as follows:



form of a crystalline powder or in the form of long needles, which have a melting point of 115 degrees C. It has a light rotation power of R_d equal to plus 48 degrees. It is stable in alkaline solution and it does not ferment in such solution.

Further Properties of Glucosamine

When glucosamine is treated with acetic acid, it yields two isomeric penta-acetates. One of these penta-acetates melts at a temperature of 183.5 degrees C and is inactive. The other melts at a temperature of 133 degrees C. and has the power of rotating light, the angle of rotation to the right being plus 86.5 degrees. When the substance is treated with hydrochloric acid, it yields two isomeric hydrochlorides. One of these hydrochlorides is obtained in the form of monoclinic crystals and has a power of light rotation to the right equivalent to 100 degrees, and the other is found in the form of hexagonal crystals and has a light rotation power to the right of plus 72.5 degrees. When the glucosamine is heated in admixture with phenylhydrazine, it yields a glucosazone which cannot be converted into dextrose. When made to react with hydroxyamine it yields a glucose-amino-oxime which has a melting point of plus 122 degres C. When treated with nitrous acid it is converted into chitose, which is a derivative of hydrates furfurane and which has the following graphical formula:



This is a curious fact and explains the action which glucosame has in the vulcanization of rubber when accelerators are employed which have been derived from furfurol. This reaction which is but little known has been studied in detail by Fischer and Androe.

Glucosamine combines with phenyl isocyanate to give, through the elimination of the water contained in the molecule, a compound which has a melting point of plus 211 degrees C.

When glucosamine is treated with bromine water, it is oxidized to form glucosamine acid and nitric acid has the power to convert it, also by oxidation, into isosaccharic acid.

According to the tests that have been made by the author himself on this matter, when glucosamine is heated in admixture with sulphur, a pentose is obtained, hydrocyanic acid and sulphuretted hydrogen. The reaction takes place in accordance with the following equation:

$$CH_2OH\,[CH\,(OH)]_3\,.\,CHO\,.\,CHNH_2 + 2S = CNSH + CH_2OH\,[CH\,(OH)]_3\,CHO + H_2S$$

This equation describes a reaction, which as will be shown later is the characteristic reaction of acceleration.

Hexoses and pentoses possess the general property of being able to combine with ammonia, and when they so combine water is eliminated and imines are formed. Thus for example glucose-imine, manose-imine, galactose-imine are such compounds and these compounds are condensed by means of acids to form aldoes and ammonia.

Glucosamine is an isomeride of these substances.

What Happens to Glucosamine in the Latex

When it is assumed that glucosamine exists in the rubber latex and that its hydrolysis takes place due to the action of lactic acid which is formed as a result of bacterial fermentation of the methyl-inosities in the rubber mass, the tendency is to follow the line of thought through to the formation of peptones and syntonines. This then explains how the peptones that are found in rubber latex by Cayla and Spencer are defined by phospho-tungstic acid. This is found to be the case in certain latices which contain a high concentration of sugars, as for example the Fantumia rubber latex.

As far as the syntonines are concerned, it may be mentioned that they are salts of proteins which have a less marked acid character and which are condensed when subjected to a hydrolytic process.

These decompositions which are accomplished by hydrolysis or which are brought about by enzymytic action, when viewed from the standpoint of bacterial action, must constitute only a primary phase of the transformations of glucosamine. Thus as has been indicated by Effront a more profound degradation takes place under the influence of enzymes, with the result that the peptones and the syntonines are condensed to give fatty acids and basic diamine compounds of the paraffine series to which the name of ptomaines or toxines has been given. They are all derived from albumens. These derivatives are formed with the production, at the same time, of substances which possess a very disagreeable odor, indol and skatol, whose appearance is a sure sign of putrefaction.

Discovery of Modern Accelerators

This formation of diamines and imines in the course of decomposition of the proteins that are contained in rubber both by bacteria and by the action of enzymes led Spence to substitute for these substances products that are obtained

by the coupling and condensation of the most energetic amines of the fatty and the aromatic series, such as piperdine or phenylenediamine. The final result was the discovery of the modern organic accelerators.

It is therefore a profound study of the protein matters that are contained in rubber and of the products of their decomposition that serves as a basis for the masterly work which was done by Spence on acceleration and not a happy chance, as that which led the chemists of the Badische Anilin und Soda Fabrick to the use of piperidine in vulcanization.

Hence for these reasons that scientist must be considered as the true discoverer and inventor of vulcanization accelerators. This discovery was moreover very clearly described in his communication, dated September 12, 1917, to the *American Chemical Society*, while in session in Boston.

It is necessary to write a short preamble before proceeding to the discussion of this work.

In making a report on his old experiments which are carried out on the vulcanization of rubber and coming back to the theory which was advanced by Axelrod and which connected together the speed of the vulcanization process and the state of polymerization of the rubber gum, Spence emphasized that both Axelrod and Weber as well as Ostwald seemed to have lost sight of the fact that vulcanization is essentially a catalytic reaction in formulating their theories.

The Work of Spence

Then returning to the polemic which was waged between Spence and Ostwald in 1910 regarding the application of the theory of adsorption to the vulcanization of rubber, Spence calls attention to the study that he made and published in the Kolloid Zeitschrift, volume 13, pages 27-1. In this paper he showed how great was the influence of a powerful catalyst on the content of combined sulphur that is found in a vulcanized rubber.

And it is in this reference, without any intent to displease both Peachey and the holders of German patents on this subject, that is found the point of departure which one has called the activated vulcanization.

"It is there," says Spence, "that is found the basis of my discovery and although it has not been made the subject of a patent application, as Peachey has stated in the *Journal of the Society of Chemical Industry*, volume 36, pages 321-1917, it none the less appears at first view to be rather remarkable, but its great complexity has not made it a proper subject for a patent, and in fact the latter has its disadvantages."

The number of substances which can be employed, with more or less success, in employing the principle of this discovery, is legion, which has the effect of minimizing the value of all the patents that have been taken out on this subject, even those taken out lately. Their intrinsic value is therefore only very small.

By the use of the methods of organic chemistry it is possible to prepare all sorts of substances and they have so been prepared that they have the power of accelerating the vulcanization of rubber and of enhancing the physical properties of the vulcanizate.

Simple organic substances such as aniline oil, piperidine, diazobenzene, metallic organic compounds, such as the alkyl derivatives of lead, salts of fatty acids, form an enormous group of substances, which, when decomposed naturally or during the course of vulcanization, give rise to other substances such as the thioureas which are very active and effective catalyzers. Each of these aforementioned classes comprises many dozens of different members, which I have tested and of them there are certain ones which give the best results during vulcanization.

An invention of such a scope cannot be covered by a patent.

In 1911 with the intent in mind of describing the results of my researches which were made along these lines for a period of years, I gave a resume of the facts which were discovered during this period in a note which appeared in August, 1911, under the title of "Improvements in the Vulcanization of Rubber." This note is given below.

Is Vulcanization a Simple Chemical Reaction?

"Since the publication of the classical experiments and researches that were made by Weber on the vulcanization of rubber, which was considered simply as the addition of sulphur or sulphuretted hydrogen to the rubber hydrocarbon, vulcanization of rubber has been considered only as a simple chemical reaction that takes place between the rubber gum and sulphur at a vulcanizing temperature. If one is inclined to accept this simple theory of rubber vulcanization, namely, that it involves only a simple chemical reaction, as has been the practice from the application of the process for the first time up to the present day, one is brought face to face with a great many difficulties of all sorts and it is not at all surprising that it was not possible under these conditions to isolate the various principles and rules that govern the attainment of perfect vulcanization of rubber.

"The idea of a simple chemical reaction taking place between the rubber gum and sulphur does not agree very well with certain results that have been obtained in the actual rubber making process in the plant.

"Ostwald has likewise tried to explain the conditions of vulcanization in a more comprehensive manner than could be done when the chemical theory of vulcanization, as propounded by Weber, is employed. He has rested his arguments on the principle that vulcanization is not a chemical process but one of physico-chemical origin. From this was born the adsorption theory of the vulcanization of rubber.

"I have cited these facts with the intent purpose of showing that from the earliest times up to the present day, no person seems to have suspected what appears to me after making many investigations on the matter to be the key to the problem of vulcanization of rubber. In order to develop my ideas clearly it is necessary, it appears to me, to describe first the discoveries that I have made on this subject.

The Spence Experiments

"The vulcanization of pure rubber gum, which means the rubber as it is found on the market deprived of its impurities, with the aid of sulphur is a reaction which takes place at a very slow rate of speed. The percentage of sulphur which enters into combination with the rubber gum within a certain given period of time is also relatively small. The best products that are obtained in the vulcanization of such rubber possess comparatively feeble physical qualities. They deteriorate rapidly and have only a slight industrial value.

"It has generally been customary to attribute this inferiority in the pure rubber to the properties of the rubber itself or to the changes that take place during the purification process.

"This way of looking at that subject is wrong. For from the experiments that we have made on this subject we have found and we can positively state that when the impurities which have been removed from the rubber are returned to it, while adding materials that have an analagous action during vulcanization there are given back to the rubber both its rapidity of vulcanization as well as its well-known physical properties.

"It is known, for example, that when para rubber is dissolved in a solvent and when the gum is thereafter precipitated with the aid of acetone, there is obtained a rubber in which the capacity for vulcanization has been singularly reduced. We have found that in restoring the so-called impurities to the rubber gum which has been first deprived of them by extraction processes, that its initial aptitude for vulcanization is restored.

"Hence the following conclusions have been drawn from the experiments that have been performed on this subject.

"1. The superior qualities of certain crude rubbers from the standpoint of vulcanization is not at all due to the quality of the pure rubber itself. This aptitude for good vulcanization is determined by the presence in the commercial rubbers of certain substances which have been regarded up to the present time as impurities and which are found in different proportions in the various kinds of rubber. These impurities are soluble in the solvent acetone and can be extracted from the rubber gum with the aid of this solvent. If the impurities which are obtained by extraction in this manner are added to rubber which is known to be of inferior quality, which vulcanizes badly and which yields a vulcanized product having poor physical qualities, then it may be stated that after such addition the inferior grade of rubber vulcanizes rapidly and acquires remarkable physical properties.

(Continued in Next Issue)

The Market Place

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ACCELERATORS—A19, A7, Thiocarbanilid.

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nine grades for the rubber industry.

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Harshaw, Fuller & Goodwin Co.

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ANTIMONY Pentasulphide, golden and crimson, very fine, pure.

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CARBONEX — Increases strength and durability of any compound while reducing the cost.

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CLAY — COTT'N BLOSS'M Brand. Absolutely uniform and gritless. Send for five-pound laboratory sample and prices.

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THE MARKET PLACE Section Continued on Second Page Following.

MARKETS

Cottons and Fabrics

NEW YORK, August 18, 1925

The volume of business transacted yesterday was the lightest of this season. The range of prices was narrow and the close showed a decline of one to an advance of seven points. Selling orders were scattered but succeeded in covering demands.

Various estimates from authoritative sources promised a crop excelling previous years, with some deterioration in Texas, Georgia and portions of the Carolinas, but almost perfect conditions in many sections.

Weather during the last few days registered high temperatures west of the Mississippi, ranging from 100 to 110. For the first time in six months, the weather map showed practically no moisture. These conditions reacted favorably on the Liverpool market, which maintained its prices here. The foreign market recovered 20 English points, its close showing an improvement over recent levels. Few contracts were offered during early trading, December demand declined above 23.80 and during the rest of the session price changes were limited to ten points. An absence of hedging operations and the circulation of large crop estimates were noticeable features of the day. The uncertain element contained in frequent Government reports has developed a cautious attitude and speculative interests are not anticipating events.

The Government report of August 1st was an estimate of 13,566,000 bales. Ginning from the 1925 crop prior to August 1st were reported as 159,373 running bales, as compared with 21,791 for 1924. The declines due to drouth in certain parts of Texas and Oklahoma have been offset by the bettering of the weevil conditions and the improved outlook in Arkansas, Tennessee and Missouri. While the Government report in several details was unexpected, its effects on prices was not productive of results experienced from previous reports. Opinion was current that the Government underestimated the crop. It was also felt that the rains that occurred at the end of July were too late to have beneficial effect on the report or to be accurately reflected in the figures.

Traders as a rule are convinced that the crop has made favorable progress since Aug. 1 and they have been influenced during all of the past week by a growing belief that the next Government report, to be based on conditions existing Aug. 16, will show a large crop indication. Judging by the inflation of the "pars" prepared for the next report, there will be an increased crop indication should the condition be the same as or higher than it was on Aug. 1.

Yesterday's New York Quotations

	Open.	High.	Low.	Close	Close Aug. 3
Oct.	23.50	23.57	23.38	23.38-23.39	24.17
Dec.	23.76	23.83	23.66	23.67-23.69	24.21
Jan.	23.22	23.33	23.16	23.16-23.20	23.63
March	23.65	23.65	23.48	23.49	23.90
May	23.85	23.95	23.78	23.78	24.20

TIRE FABRICS

With tire companies generally continuing their full working schedules, and with occasional demands for spot supplies, which are not always easily met, the tire fabric situation during the past week has been somewhat improved. There still exists the severe competition for business. Prices quoted have indicated firmness and payments to mills by tire companies have been on a higher basis than has been usual in the past. Many mills are satisfactorily sold up through the current year, but business has been rather unevenly distributed. Some tire companies have been willing to place orders through June, 1926.

CORD FABRICS

Combed Sakellarides		Nominal	
Combed Peeler	lb.	Nominal	
Carded Peeler		.50 @	.51
Combed Egyptian uppers	lb.	.65 @	.70
Carded Egyptian uppers	lb.	.58 @	.63

SQUARE WOVEN

17¼-ounce Egyptian uppers, combed	lb.	Nominal	
17¼-ounce Egyptian uppers, carded	lb.	.59 @	.61
17¼-ounce Sakellarides, combed	lb.	Nominal	
17½-ounce Peeler, carded	lb.	.47 @	.49

Ducks—The situation in cotton duck during the last few days has been satisfactory, showing an improvement over the previous week when mills reported business quiet and orders few. Price basis held strong and there has been a tendency to quote higher than the recent lower levels. Recently there has been some fairly good inquiry for standard and specialty constructions. Mills report good business booked and buyers are accommodating themselves to the firmer market basis.

SHEETINGS

40-inch	2.50-yard	yd.	.15 @	—
40-inch	2.85-yard	yd.	.12¾ @	13
40-inch	3.15-yard	yd.	.13½ @	—
40-inch	3.60-yard	yd.	.11 @	—
40-inch	3.75-yard	yd.	.10¼ @	—
40-inch	4.25-yard	yd.	.09 @	.09¼

DUCKS

Belting	lb.	.41½ @	.43
Hose	lb.	.41½ @	.43
Enameling	lb.	.43 @	.49
Shoe Ducks	lb.	.48 @	.50
Single filling	lb.	.19½ @	.21
Double filling	lb.	.22½ @	.23

BURLAPS
(Carload Lots)

7½-ounce	40-inch	8.00 @	8.05
8-ounce	40-inch	8.10 @	8.15
10 -ounce	40-inch	10.45 @	10.50
10½-ounce	40-inch	10.65 @	10.70

TIRE FABRICS

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120 Broadway New York

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Aero Brand, product of the highest purity from dependable source of supply.
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FABRICS—Stockinets, Jersey Cloth and Special Fabrics for the Rubber Industry.
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MANDRELS--CIRCULAR
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Prompt Service—Let us quote you.
The Clyde E. Lowe Co.
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DRY KILN—for drying crude rubber and chemicals—Hunter Process.
Carrier Engineering Corporation
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FACTICE—Prevents blooming, makes colors fast and a smoother batch.
Stamford Rubber Supply Co.
Stamford, Conn.

MOLDS AND CORES—
Tire building equipment; general machine work.
The Akron Equipment Co.
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FABRICS—Tire fabrics, Egyptian—Peeler, Karded and Combed, Cord and Square.
Cabarrus Cotton Mills
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GUAYULE—"Duro" Brand washed and dried ready for compounding.
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FABRICS—Tire fabrics—coarse builders, chafers, breakers in all grades.
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HEEL BURRS—with central holes; flat and cupped.
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Uniformity, reliability, cleanliness.
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Butler, N. J.

FABRICS—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.
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for all purposes.
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THE MARKET PLACE Section Continued on Second Page Following.

Scrap Rubber

NEW YORK, August 18, 1925

The scrap rubber market remains easy with a downward tendency in prices shown. There appears to be an ample supply of all grades available now and stocks are being released more freely than at the beginning of the month. Since our last report there have been several minor advances especially in Inner Tubes No. 1 and Boots and Shoes. Demand from reclaimers contiuues in good force and dealers expect this condition to hold for sometime. Prices follow:

Auto tire peelings	.02	@	.02¼
Standard White auto ....ton	25.00	@	—
Mixed auto .....ton	22.00	@	24.00
Bicycle tires .....ton	10.00	@	11.00
Clean solid truck tires ....ton	33.00	@	36.00
Boots and shoes	.02¼	@	.02½
Arctics, untrimmed	.01¼	@	.01½
Arctics, trimmed	.01⅝	@	.01⅛
Inner tubes, No. 1	.09½	@	.10
Inner tubes, compounded	.07	@	.07½
Inner tubes, red	.06¼	@	.06¾
Battery jars, clean hard rubber	.01	@	.01⅛
Air Brake Hose .....ton	14.00	@	16.00
Rubber hose .....ton	9.00	@	11.00

Reclaimed Rubber

NEW YORK, August 18, 1925

Reclaimers are still working at capacity to fill demands from tire and mechanical goods manufacturers and there seems little chance of a let-up for some time to come. Quotations for several grades have eased off a little in the past week, the super-reclaims showing a drop of 2 cents. High grade mechanicals now are quoted at 18 @ 20 cents, a reduction of about 2 cents. Scrap is easier, with more quantities being released by dealers.

Friction (Uncured)			
No. 1 .....lb.	.50	@	.55
No. 2 .....lb.	.40	@	.45
High Tensile Black			
Super-Reclaim No. 1 ..lb.	.30	@	.32
" " No. 2 ..lb.	.17	@	.19
Shoe			
Unwashed .....lb.	.10½	@	.11
Washed .....lb.	.13½	@	.14
Tube			
No. 1 (Floating) .....lb.	.24	@	.25
No. 2 (Compounded) ..lb.	.19	@	.20
Tires			
Black unwashed .....lb.	.10	@	.10½
Black, washed .....lb.	.12½	@	.13
Dark Gray .....lb.	.14½	@	.15
Light Gray .....lb.	.17	@	.18
White .....lb.	.19	@	.21
Truck .....lb.	.10½	@	.11
Miscellaneous			
Mechanical Blends .....lb.	.08	@	.09
Red, High Grade .....lb.	.18	@	.20

Crude Rubber

NEW YORK, August 17, 1925

Within a period of a week from our last market report on the 3rd of the month, the rubber market dropped from 96 cents to 72½ cents—a decrease of about 24 cents. The result of such a rapid market change has been to unsettle trading conditions and to cause only small lots to change hands.

Consumers refuse to buy on a decreasing market and in this case prices rose almost immediately and buyers soon became interested in spot and nearby positions. On a whole, however, the tone of the market, both local and in London, has been too spotty to warrant much business being done. At the end the market was weak for after rising from the 72 cent level to 84 cents on the 13th, it again broke today to 79 cents. Buyers were few and sellers were willing to hedge to make sales.

Early in the month with rubber at 90 cents, buyers showed a lack of interest, being content to wait for a decline. This action resulted in an expectation of lower prices. The next day saw a decline of 5 cents to the 85 cent level and the market closed steady. Buyers were interested in nearby positions. A steady market was anticipated. A temporary halt in the decline was reported on the 6th when dealers appeared in the market as buyers and the tone was much steadier, closing at 87. On the next day, buyers showed no interest and prices declined 4 cents to 83. At this level it was thought that the bottom had been reached but over the week-end the price broke to 72½ and sellers were making very few offers at this level.

London stocks on August 10 were 4572 tons, an advance of 295 tons over the previous week and with an addition of 520 tons last week, the total today is about 5092 tons. A better tone prevailed in the market at the beginning of last week but on the 11th, no change in prices had taken place. Little factory interest was manifested at this time. During the next two days firmness ruled with prices rising to 84 cents on the 13th but the next few days brought another decrease to 81½ and today's closing was 79 cents. Lack of buying interest, however, is expected to bring further declines within a few days. Today's closing:

NEW YORK MARKET

Plantations—			
Ribbed Smoked Sheets			
Spot	.78	@	.79
August	.77	@	.77½
September	.74	@	.75
Oct.-Dec.	.63	@	.64
January-March	.58	@	.59
First Latex, crepe spot	.78	@	.79
Amber Crepe, No. 2, spot	.69	@	—
" " No. 3,	.68	@	—
" " No. 4,	.67	@	—
Brown Crepe, Rolled	.52	@	—
" " Clean, thin.	.62	@	—
" " Specky	.60	@	—
Pontianac—			
Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		
Paras—			
Up-river Fine	.73	@	.74
" Medium	.67	@	—
" Coarse	.45	@	.50
Islands, Fine	.63	@	.65
Acre Bolivian, fine	.75	@	—
Tapajos, fine	.69	@	—
Cut Beni Bolivian, fine	.70	@	—
Caucho Ball—			
Upper, shipment	.51	@	.52
Centrals—			
Central, scrap, prime	.47	@	—
Corinto, scrap	.48	@	.49
Esmeraldo, sausage	.48	@	.49
Guayule, w and d	.64	@	—
Africans—			
Benguela, No. 2	Nominal		
Congo, upper, black	Nominal		
" " red	Nominal		
Kassai, Prime Red	Nominal		
Balata—			
Block, Columbia	.51	@	—
" Cuidad	.62	@	—
Surinam, sheet	.74	@	—
Gutta Percha—			
Siak	.23	@	—
Red Macassar	2.80	@	3.00
Chicle—			
Mexican, Yucatan	.68	@	—

LONDON MARKET

Standard Ribbed Smoked Sheets—	
Spot	39½d
August	39¼
September	36
Oct.-December	31
Jan.-March	28

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—	
Spot	32⅛d
August-Sept.	31¼
Oct.-December	29¼
Jan.-March	27

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Pensacola Tar and Turpentine Co.
Gull Point, Florida

TECHNOLOGIST — Testing, formulae, costs, litigation, experimental work on all classes of rubber products.
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5 William St., Belleville, N. J.

THERMOMETERS—Recording, controlling temperature and pressure controllers.
American Schaeffer & Budenberg Corp.
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New York Pittsburgh Chicago
Cleveland San Francisco

CHEMICALS & COMPOUNDING INGREDIENTS

Accelerators — Colors — M.R. — Compounding Ingredients Softeners — Vulcanizing Ingredients — Rubber Substitutes

NEW YORK, August 17, 1925—A steady tone is apparent in the market for chemicals and compounding ingredients. No price changes of any importance are reported, with all of the more important items showing no change. Demand from rubber manufacturers continues in good volume and from the orders being received, there appears little sign of a let-up during this month. The trade is, however, expecting lessened demands during September and October when the tire factories begin to reduce daily production schedules. Boots and shoes, mechanicals and other branches of the industry are working at capacity. Prices follow:

ACCELERATORS

Organic			
Aldehyde ammonia, crystals	lb.	$ .90	@ .93
Aniline oil, drums	lb.	.17	@ .17½
Di-Ortho-Tolylguanidine	lb.	1.10	@ 1.13
Diphenylguanidine	lb.	.95	@ .98
Ethylidene aniline	lb.	.60	@ .65
Excellerex	lb.	.29	@ .32
Formaldehyde-Aniline	lb.	.40	@ .42½
Hexamethylene-tetramine	lb.	.80	@ .82½
Paraphenylenediamine	lb.	1.25	@ 1.30
Piperidine-Piperidyldithio-Carbamate	lb.	4.80	@ 5.00
Super-Sulphur No. 1	lb.	.50	@ .55
Super-Sulphur No. 2	lb.	.18	@ .30
Tensilac, No. 41	lb.	.65	@ —
Tuads	lb.	4.50	@ 5.00
Thiocarbanilide, kegs	lb.	.24	@ .30
Triphenylguanidine	lb.	.70	@ .75
Vulcone	lb.	.75	@ .79
Zimate	lb.	5.00	@ —
Inorganic			
Lead, sublimed blue	lb.	.10	@ —
Lead, white	lb.	.09½	@ —
Litharge, domestic	lb.	.11½	@ —
Lime, superfine	lb.	.01½	@ .02
Magnesia, calcined, light	lb.	.24	@ .25
extra light	lb.	.40	@ .45
heavy	lb.	.04	@ .06½

COLORS

Blacks			
Arrow "Aerfloted"	lb.	.07	@ .11
Bone Black	lb.	.05½	@ .09
Carbon "	lb.	.07	@ .11
Drop "	lb.	.07½	@ .14
Ivory "	lb.	.12	@ .45
Lamp "	lb.	.12	@ .40
Micronex	lb.	.08	@ .12
Thermatomic carbon	lb.	.04	@ .08
Blues			
Cobalt	lb.	.21	@ .26
Prussian	lb.	.35	@ .36
Ultramarine	lb.	.08	@ .35
Browns			
Iron oxide	lb.	.02¼	@ .06¼
Sienna, Italian	lb.	.04	@ .14
Umber, Turkey	lb.	.04	@ .06
Vandyke, domestic	lb.	.03	@ .03½
Greens			
Chrome, light	lb.	.28	@ .30
medium	lb.	.30	@ .32
dark	lb.	.32	@ .34
commercial	lb.	.09	@ .10
Chromium Oxide, bbl.	lb.	.33	@ .35
Reds			
Antimony crimson, 15/17 F.S.	lb.	.43	@ .45
sulphur free	lb.	.45	@ —
golden, 15/17 F.S.	lb.	.17	@ —
pentasulphide, pure,	lb.	.35	@ .38
15/17 F.S.	lb.	.33	@ .36
red sulph. 15-17F.S.	lb.	.16	@ .20
Indian English	lb.	.11	@ .15
Oximony	lb.	.13½	@ —
Para toner	lb.	.90	@ 1.00
commercial	lb.	.13½	@ .14½
Red oxide, reduced	lb.	.04	@ .12
pure	lb.	.12	@ .14
Toluidine toner	lb.	1.85	@ 2.10
Venetian red	lb.	.01½	@ .05
Vermillion, quicksilver, English	lb.	1.40	@ 1.50
domestic	lb.	.15	@ .25
Whites			
Albalith	lb.	.06⅜	@ .06⅝
Aluminum bronze		.60	@ 1.25
Lithopone, Akcolith	lb.	.06	@ .06½
Lithopone, Azolith	lb.	.05⅝	@ .06⅛
Zinc Oxide—American Process XX red	lb.	.07¾	@ .08¼
Kadox, black label, kegs	lb.	.10⅝	@ .11¼
blue " " "		.09⅝	@ .10⅛
red " " "		.08⅝	@ .09⅛
American Azo ZZZ (lead free)	lb.	.07¼	@ .07¾
ZZ (under 5% leaded)	lb.	.07	@ .07½
Z (8-10% leaded)	lb.	.06¾	@ .07¼
Zinc Oxide—French Process White seal	lb.	.12	@ .12¼
Green seal	lb.	.10¾	@ .11¼
Red seal	lb.	.09⅞	@ .10¼
Yellows			
Chrome, light		.18	@ .18½
dark and medium	lb.	.18	@ .18½
Cadmium Sulphide	lb.	2.00	@ 2.50
Ocher, French medium	lb.	.02½	@ .02⅞
domestic	lb.	.01½	@ .02½

COMPOUNDING INGREDIENTS

Aluminum Flake (f.o.b. plant)	ton	21.85	@ 24.50
hydrate light	lb.	.17	@ .18
Ammonia carbonate	lb.	.13	@ .15
Asbestine	ton	18.00	@ 20.00
Barium carbonate	ton	54.00	@ 56.00
Barium Dust	lb.	.05	@ .06
Barytes southern off-color, ton		12.00	@ 18.00
Western prime white ton		22.00	@ 23.00
imported	ton	27.00	@ 35.00
Basofor	lb.	.04½	@ —
Blanc fixe, dry f.o.b. works	lb.	.04	@ .04¼
Carrara filler	lb.	.01¾	@ .02
Chalk, precip., extra light	lb.	.04¼	@ .05
heavy	lb.	.03⅓	@ .04
Clay, China, domestic	ton	13.00	@ 22.00
Catalpo (fact.)	ton	35.00	@ 40.00
Dixie	ton	20.00	@ 35.00
Blue Ridge, Dark	ton	9.00	@ —
" " Light	ton	12.00	@ —
Langford	ton	12.00	@ 22.00
Glues, extra white	lb.	.21	@ .29
medium white	lb.	.18	@ .24
common bone	lb.	.11	@ .14
Graphite flake, bbls.	lb.	.06½	@ .12
Infusorial earth, powdered	ton	23.00	@ 25.00
bolted	ton	15.00	@ 20.00
Liquid latex	gal.	2.75	@ —
Magnesia, carbonate	lb.	.08¼	@ .09
Mica, powdered	ton	65.00	@ 80.00
Rotten Stone (powdered)	lb.	.02½	@ .04½
Soapstone, powdered	ton	15.00	@ 22.00
Starch, powdered	cwt.	4.07	@ 4.55
Talc, domestic	ton	16.00	@ 18.00
Terra Alba	cwt.	1.25	@ 2.00
Tripoli, white	lb.	.02	@ .02¼
Whiting, commercial	cwt.	1.00	@ 1.15
gilder's bolted	cwt.	1.25	@ 1.35
English cliffstone	cwt.	1.50	@ —
Paris white American	cwt.	1.50	@ 1.75
Quaker	ton	13.00	@ 15.00
Sussex	ton	8.00	@ 10.00
Wood pulp XXX	ton	35.00	@ —
" " X	ton	25.00	@ —

MINERAL RUBBER

Genasco (factory)	ton	50.00	@ 52.00
Granulated M.R.	ton	35.00	@ 45.00
Hydrocarbon, Hard	ton	29.00	@ 35.00
Hydrocarbon, Soft	ton	29.00	@ 35.00
320/340 M.P. hydrocarbon (c. l. factory)	ton	47.00	@ 52.00
300/310 M.P. hydrocarbon (c. l. factory)	ton	42.00	@ 47.00
Paradura	ton	65.00	@ 75.00
Robertson, MR, solid	ton	35.00	@ 75.00
M.R. (gran)	ton	42.00	@ 80.00

SOFTENERS

Acids			
Acetic, 28%	cwt.	3.00	@ 3.25
Cresylic, 97%	gal.	.59	@ .63
95%		.56	@ .60
Muriatic, 20%	cwt.	.90	@ 1.00
Nitric, 36 degrees	cwt.	4.50	@ 4.75
Sulphuric, 60 degrees	ton	10.00	@ 11.00
66 degrees	ton	14.00	@ 15.00
Tartaric, crystals	lb.	.29	@ —
Alkalies			
Caustic soda, 76%	cwt.	3.60	@ —
Soda ash, 58% C.L.	cwt.	1.43	@ 1.45½
Oils			
Castor, No. 3, bbls.	lb.	.16	@ —
Corn, crude, bbls.	lb.	.12	@ —
refined	lb.	.13¼	@ —
Cottonseed, crude		.09¾	@ —
Glycerine C.P. drums	lb.	.19	@ .19½
Linseed, Raw C.L. bbl.	gal.	.99	@ —
Palm, Niger	lb.	.08⅝	@ .09
Lagos	lb.	.09⅛	@ .09¼
Peanut, domestic, crude	lb.	.13	@ —
Petrolatum, white		.10¾	@ .11
amber		.03⅝	@ .03¾
dark amber	lb.	.03⅜	@ .03½
Pine, steam distilled	lb.	.65	@ .66
Rapeseed, refined	gal.	1.00	@ —
blown	gal.	1.05	@ —
Rosin, first rectified	gal.	.58	@ .60
second rectified	gal.	.61	@ .63
Soya Bean, crude		.13¼	@ .13½
Tar, commercial	gal.	.30	@ .32
Resins and Pitches			
Parra M.R.	lb.	.06	@ .07
Tar Retort	bbl.	15.00	@ —
kiln burned	bbl.	15.50	@ —
Pitch, Burgundy	lb.	.06	@ .06½
coal tar	gal.	.05½	@ .06
pine	bbl.	6.00	@ 6.50
Rosin, grade K	bbl.	11.40	@ —
Solvents			
Alcohol, denatured, No. 1 bbls.	gal.	.52½	@ .56½
Benzol, 90%	gal.	.22	@ —
pure		.24	@ —
Carbon bisulphide	lb.	.06½	@ .07½
tetrachloride	gal.	.07⅛	@ .08
Dimethylaniline	lb.	.48	@ .50
Motor gasoline, steel bbls.	gal.	.20	@ —
Naptha, V. M. & P.	gal.	.20½	@ —
Toluene	gal.	.26	@ —
Turpentine, spirits	gal.	1.06	@ 1.08
wood	gal.	.93	@ .95
Waxes			
Beeswax	lb.	.55	@ .65
Carnauba, No. 1	lb.	.38	@ .39
Ceresin, white	lb.	.10	@ .11
Montan, crude	lb.	.06	@ .06½
Ozokerite, black	lb.	.24	@ .25
green	lb.	.26	@ .30
Paraffine White A.M.P.	lb.	.06	@ .06⅛
Yellow A.M.P.	lb.	.06¼	@ .06⅜
Sweet wax	lb.	.12	@ —

SUBSTITUTES

Black	lb.	.08	@ .15
White	lb.	.09½	@ .16½
Brown	lb.	.10	@ .15
Brown factice	lb.	.09	@ .18
White factice	lb.	.09½	@ .16½

VULCANIZING INGREDIENTS

Black hyposulphite	lb.	.18	@ .20
Ethyl Chloride, Cyl.	lb.	.55	@ —
" " Drums	lb.	.45	@ —
Sulphur Chloride (drums)	lb.	.04½	@ .06
Sulphur flour			
Commercial bags	cwt.	1.35	@ 1.70
" bbls.	cwt.	1.70	@ —
Superfine, bags	cwt.	2.20	@ 2.50
" bbls.	cwt.	2.60	@ 2.90
100% pure, refined, bags	cwt.	2.35	@ 2.65
bbls.	cwt.	2.60	@ 2.90

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This Weeks News

- this week

Every rubber executive or engineer—no matter how busy he is—will read news of the industry. That's why he reads every issue of THE RUBBER AGE. He knows that the news found there is news of this week—not of last month or last year.

Firms selling their products to rubber factories can, of course, profit by this great reader interest.

THE RUBBER AGE, 225 Fourth Ave., N. Y.

REVUE GENERALE DU

CAOUTCHOUC

New monthly trade and technical paper covering all phases of the rubber trade in France.

Annual Subscription in United States—40 francs. Single Copy—5 francs.

REVUE GENERALE DU CAOUTCHOUC

18, Rue Duphot

Paris (1er)

EDITOR'S REVIEW DESK

Books **Trade Catalogs** **Articles**

BUFLOVAK: Atmospheric and Vacuum Dryers, Evaporators and Chemical Apparatus. Issued by the Buffalo Foundry & Machine Co., Buffalo, N. Y.

Drying apparatus manufactured by this Company is described with clarity in its latest catalog. Sections on the Company's research departments and manufacturing facilities preface the book and tables are included wherever needed to make explanation more thorough. The catalog is fully illustrated and the section devoted to the vacuum shelf dryer, in use in the rubber industry, is accompanied by a table of standard sizes.

* * *

YEAR BOOK, AMERICAN ENGINEERING STANDARDS COMMITTEE FOR 1925. Issued by the American Engineering Standards Committee, New York City.

This book, which summarizes the Committee's work during the past year, shows that 68 standards have already been approved and 100 other projects are under way. The safety code for rubber machinery, B-28, is designed to overcome the hazards encountered in the manufacture of rubberized fabrics, rubber tires, fire and garden hose, footwear, moulded rubber goods, rubber belting, reclaimed rubber, rubber solution and kindred products. It covers the machines used in breaking down, washing, milling, cutting, moulding and vulcanizing of rubber. Calenders, spreaders, coaters and dryers, and machinery manufacturing rubber sheeting and rubber tires are included, fabric weaving and spinning machines being excluded.

A full list of cooperating bodies is given, together with alphabetical lists of members and sustaining members.

* * *

COMMERCE YEARBOOK FOR 1924. Compiled by the Bureau of Foreign and Domestic Commerce. Sold by the Superintendent of Documents, Government Printing Office, Washington, D. C. Price $1.00.

This is the third issue of the Commerce Yearbook. With the object of gathering all possible information on the world's industry and commerce and placing it so that it might be available for ready reference, the compilers in 718 pages, have covered their subject most thoroughly. Rubber and its products are treated in a separate chapter and the activities in the industry outlined and analyzed in tables, charts and other data. Crude rubber consumption is reported for 1924 at 675,983,000 lb., three-fifths of this being used in the manufacture of pneumatic automobile tires. The total value of manufactured rubber products is given as $892,720,000. Price movement and foreign trade are discussed in detail.

* * *

STANDARDS OF HYDRAULIC SOCIETY. Recommended by the Hydraulic Society, 1925, 90 West St., New York City. 34 pp., paper covered.

In addition to information published in the two previous editions, the Society has incorporated in its latest issue new and valuable data on the standard classification of pumps, nomenclature and definitions, standard dimensions for cast iron flanges and a complete list of chemicals and other special liquids, with recommendations for materials to be used in construction of pumps handling these special liquids. Charts showing the friction of water in pipes are given and also one on viscosimeter conversion.

* * *

CONTROLLING SEASONAL SLUMPS. No. 1 in a series on Steadying Business. Issued by the Policyholders' Service Bureau of the Metropolitan Life Insurance Company, N. Y.

After a careful investigation of this greatest of business problems, the Bureau reaches the conclusion that a portion of commercial inactivity can be remedied by the adoption of several courses, chief among which is the distribution of personnel from departments that are dull to others where work may be increased, heavier production for stock and advance orders and the manufacture of side-lines of goods to dovetail with the main products. The adjusting of prices from season to season, the use of the budget to provide for future needs and seasonal advertising are other topics discussed.

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A COLLAR DISEASE OF RUBBER SEEDLINGS. Published in the *Malayan Agricultural Journal* for June, 1925.

Two diseases, caused by fungus, which produce the "die-back" of rubber branches have recently been studied and the results of this research are given in an instructive article by A. Sharples. Observed in Malaya, Java and Ceylon, it is thought that the primary cause of the infection is the planting of seedlings too far down in the ground, so that part of the stem, which is still green and not yet protected by cork in the bark against external influences, is brought into contact with the hot upper layer of the greatly heated soil surface and is scorched by it. Another cause was given as the abrupt change in climatic conditions, favoring the entry of the fungus. Treatment advised is the removal of the nursery beds containing diseased seedlings and the imersion of the infected plants in a receptacle containing 5 per cent Izal. The plants are then placed in a box prior to removal for burning. After this treatment a second inspection is to be made, following the same procedure as in the first.

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STUDIES ON HEVEA LATEX. III. Proteins and Allied Bodies. By W. N. C. Belgrave. Published in the *Malayan Agricultural Journal* for June, 1925.

Investigations and experiments to determine the distribution of nitrogen among the proteins, albumoses, amino-acids and amides produced results that might be expected from normal metobolic processes. The constitution of the proteins by groups of amino acids and the distribution of nitrogen in the amino acids themselves were investigated and as far as the results obtained could be accepted as giving a true picture, no unusual features were presented.

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DAILY RUBBER TRADE: Markets, Prices, News, Cables. Issued daily by the Atlas Publishing Co., Inc., 150 Lafayette Street, New York.

On July 27 this journal made its initial appearance, with news of foreign and domestic markets, crude rubber prices, raw cotton, tire fabric prices and charts giving trend of crude rubber prices and imports and scrap rubber price fluctuations over a period of years. A paper such as this, issued daily and devoted exclusively to information regarding the world rubber situation, prices, events controlling production and demand and intimate phases of the rubber industry, should find wide popularity and appeal to all who desire up-to-the minute information on rubber.

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